# CFD-S47

# SERVICE MANUAL

**Ver 1.0 1998. 12**

*US Model*
*E Model*

| | | |
|---|---|---|
| CD Section | Model Name Using Similar Mechanism | NEW |
| | CD Loading Mechanism Type | FLM-S47-149 |
| | CD Mechanism Type | KSM-213CCP |
| | Optical Pick-up Name | KSS-213C |
| TC Section | Model Name Using Similar Mechanism | CFD-V10 |
| | Tape Transport Mechanism Type | MF-V10-117 |

## SPECIFICATIONS

**AUDIO POWER SPECIFICATIONS (US Model)**
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 6-ohm loads, both channels driven from 100 - 10,000 Hz: rated 3.5 W per channel-minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

**CD player section**
System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wave length: 780 nm
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of channels
2
Frequency response
20 - 20,000 Hz +1/–2 dB
Wow and flutter
Below measurable limit

**Radio section**
Frequency range

| | | |
|---|---|---|
| FM | US, E model | 87.6 - 108 MHz |
| | Singapore model | 87.6 - 107 MHz |
| AM | US, E model | 530 - 1,710 kHz |
| | Singapore model | 531 - 1,602 kHz |

IF
FM: 10.7 MHz
AM: 450 kHz
Aerials
FM: Telescopic aerial
AM: Built-in ferrite bar aerial

**Cassette-corder section**
Recording system
4-track 2 channel stereo
Fast winding time
Approx. 150 sec. with Sony cassette C-60
Frequency response
TYPE I (normal): 80 - 10,000 Hz

– Continued on next page –

## CD RADIO CASSETTE-CORDER

MICROFILM

SONY®

**General**

Speaker
- Full range: 8 cm (3 1/4 in.) dia., 6 ohms, cone type (2)

Outputs
- Headphones jack (stereo minijack)
- For 16 - 68 ohms impedance headphones

Maximum power output
- 3.5 W + 3.5 W (US, E model)
- 4.5 W + 4.5 W (Singapore model)

Power requirements
- For CD radio cassette-corder:
- 120 V AC, 60 Hz (US, E model)
- 230 V AC, 50 Hz (Singapore model)
- 9 V DC, 6 R20 (size D) batteries
- For memory back-up:
- 6 V DC, 4 R6 (size AA) batteries
- For remote control:
- 3 V DC, 2 R6 (size AA) batteries

Power consumption
- AC 25 W

Battery life
- For CD radio cassette-corder:

| **FM recording** |
|---|
| Sony R20P: approx. 3.5 h |
| Sony alkaline LR20: approx. 10 h |
| **Tape playback** |
| Sony R20P: approx. 1.5 h |
| Sony alkaline LR20: approx. 5 h |
| **CD playback** |
| Sony R20P: approx. 1 h |
| Sony alkaline LR20: approx. 4 h |

Dimensions
- Approx. 420 × 177 × 281 mm (w/h/d) (16 5/8 × 7 × 11 1/8 inches) (incl. projecting parts)

Mass
- Approx. 5.1 kg (11 lb. 4 oz.) (incl. batteries)

Supplied accessories
- AC power cord (1)
- Remote control RMT-CS47A (1)

Design and specifications are subject to change without notice.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

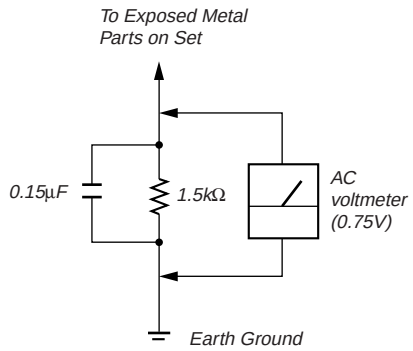


***Fig. A. Using an AC voltmeter to check AC leakage.***

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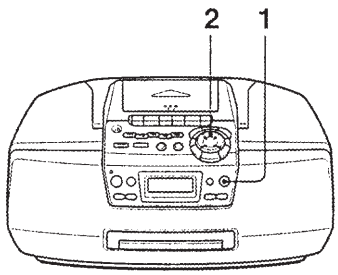
This section is extracted from instruction manual.



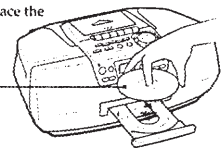
## Playing a CD




Connect the supplied AC power cord (see page 25).

**1**

Press ≜ CD OPEN/CLOSE (direct power-on) and place the CD on the CD tray.

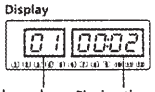



**2**

Press ►II.

The CD tray closes and the player plays all the tracks once.

Display

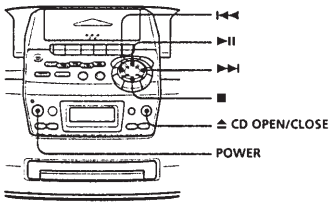



Track number Playing time

**Tip**

Next time you want to listen to a CD, just press ►II. The player turns on automatically and starts playing the CD.

**Use these buttons for additional operations**



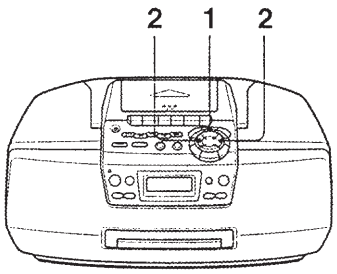

| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| stop playback | ■ |
| pause playback | ►II (II on the remote) Press the button again to resume play after pause. |
| go to the next track | ►►I |
| go back to the previous track | I◄◄ |
| remove the CD | ≜ CD OPEN/CLOSE |
| turn on/off the player | POWER |







## Listening to the radio

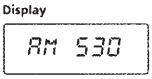



Connect the supplied AC power cord (see page 25).

**1**

Press BAND until the band you want appears in the display (direct power-on).

Display



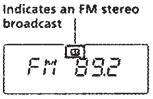

**2**

Hold down TUNE +/►►I or TUNE –/I◄◄ (TUNE + or – on the remote) until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, press the button repeatedly to change the frequency step by step.

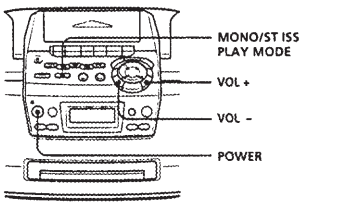
Indicates an FM stereo broadcast




**Tips**

- If the FM broadcast is noisy, press MONO/ST ISS•PLAY MODE until "Mono" appears in the display and the radio will play in monaural.
- Next time you want to listen to the radio, just press BAND. The player turns on automatically and starts playing the previous station.

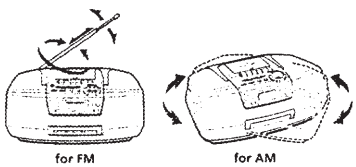
**Use these buttons for additional operations**



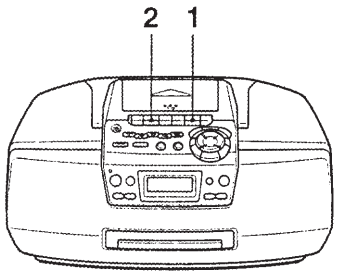

| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| turn on/off the radio | POWER |

**To improve broadcast reception**

Reorient the antenna for FM. Reorient the player itself for AM.



## Playing a tape

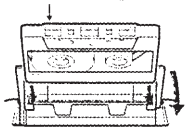



Connect the supplied AC power cord (see page 25).

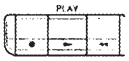
**1**

Press ■≙ to open the tape compartment and insert a recorded tape. Use TYPE I (normal) tape only. Close the compartment.

**With the side you want to play facing upward**



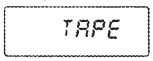
**2**




Press ►.

The player turns on (direct power-on) and starts playing.

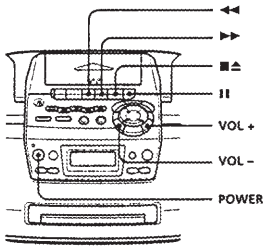
**Display**




**Tip**

Next time you want to listen to a tape, just press ►. The player turns on automatically and starts playing the tape.

**Use these buttons for additional operations**



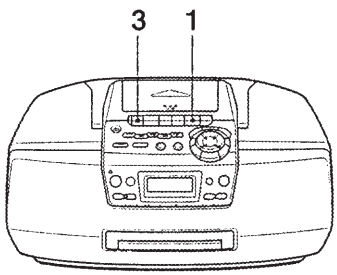

| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| stop playback | ■≙ |
| fast-forward or rewind the tape | ►► or ◄◄ |
| pause playback | II<br>Press the button again to resume play after pause. |
| eject the cassette | ■≙ |
| turn on/off the player | POWER |





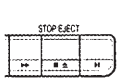


## Recording on a tape



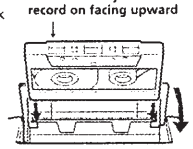

Connect the supplied AC power cord (see page 25).

**1**

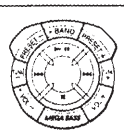



Press ■≙ to open the tape compartment and insert a blank tape. Use TYPE I (normal) tape only.

**With the side you want to record on facing upward**



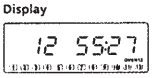
**2**



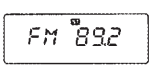
Select the program source you want to record.

To record from the CD player, insert a CD (see page 4) and press ■ on the CD section.

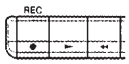
**Display**



To record from the radio, tune in the station you want (see page 6).




**3**

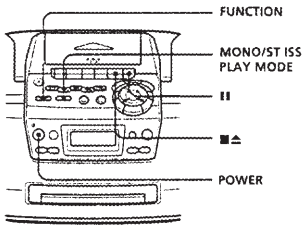



Press ● to start recording (► is depressed automatically).

**Tips**

- Adjusting the volume or the audio emphasis (see page 27) will not affect the recording level.
- If the AM program makes a whistling sound after you've pressed ● in step 3, press MONO/ST ISS•PLAY MODE (Interference Suppress switch) repeatedly until the noise is at a minimum.
- For the best results, use the AC power as a power source.
- To erase a recording, proceed as follows:
  1 Insert the tape whose recording you want to erase.
  2 Press FUNCTION to select "TAPE".
  3 Press ●.

**Use these buttons for additional operations**




| To | Press |
|---|---|
| stop recording | ■≙ |
| pause recording | II<br>Press the button again to resume recording. |
| turn on/off the player | POWER |

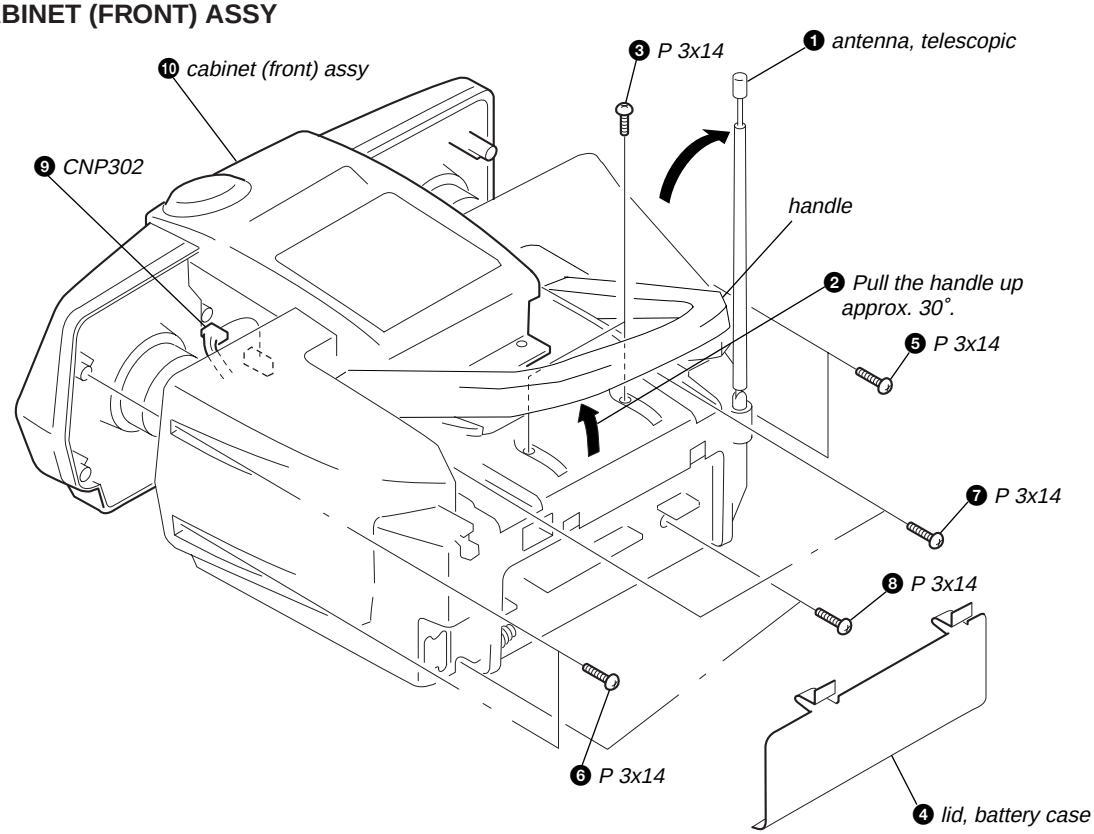
# SECTION 2
# DISASSEMBLY

• The equipment can be removed using the following procedure.

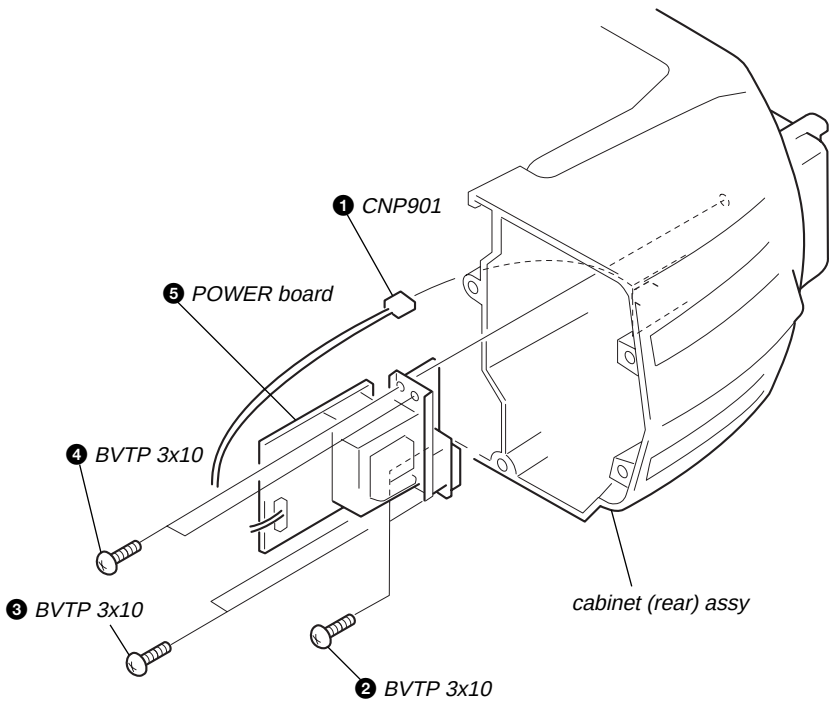
Set ➡ Cabinet (front) assy ➡ Cabinet (upper) assy ➡ Tuner board
Cabinet (upper) assy ➡ Power board
Cabinet (upper) assy ➡ CD mechanism block ➡ SW (L) board, SW (R) board
CD mechanism block ➡ Plate assy, chuck ➡ Tray ➡ Loading board ➡ CD board ➡ CD mechanism block
CD mechanism block ➡ Main board ➡ SW (TOP) board, Record/Playback switch board, Headphone board ➡ Cassette mechanism block

**Note :** Follow the disassembly procedure in the numerical order given.

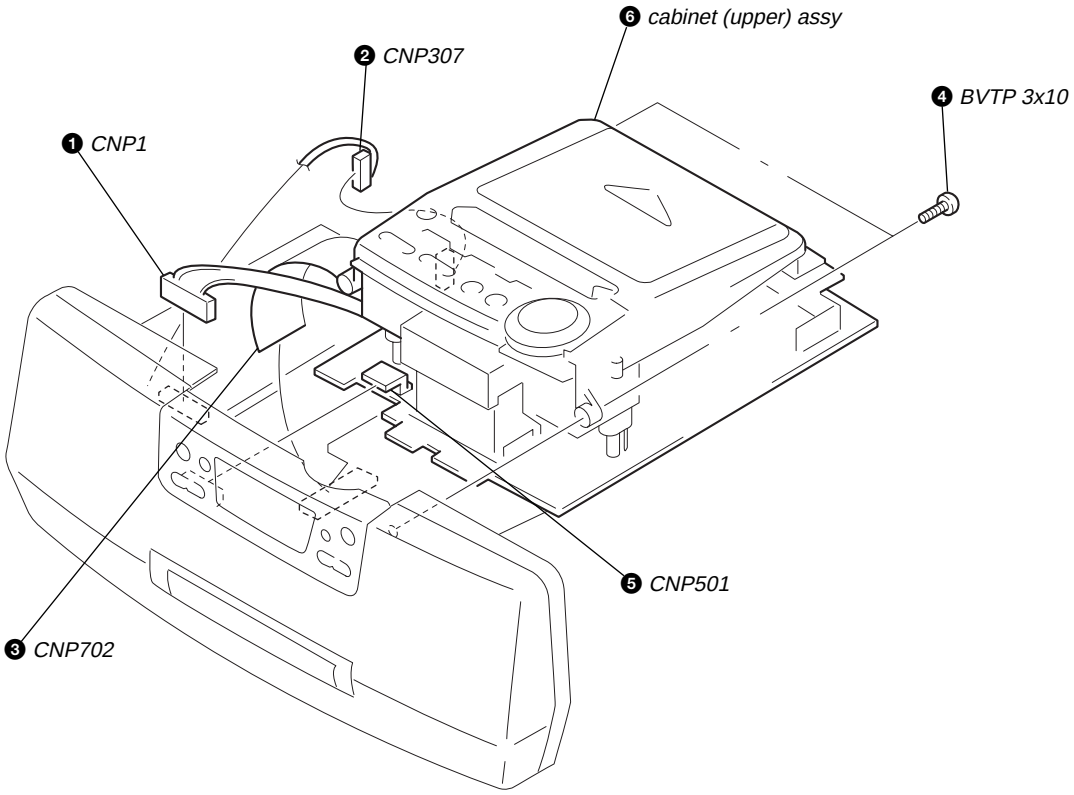
## 2-1. CABINET (FRONT) ASSY



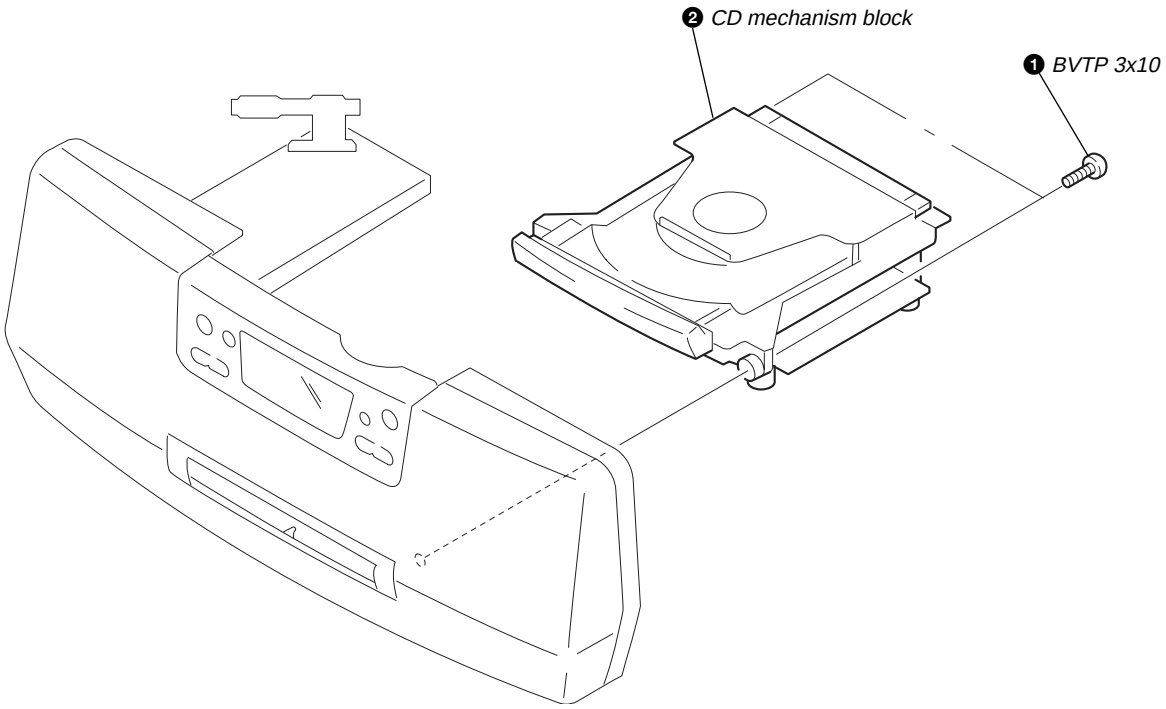

## 2-2. POWER BOARD



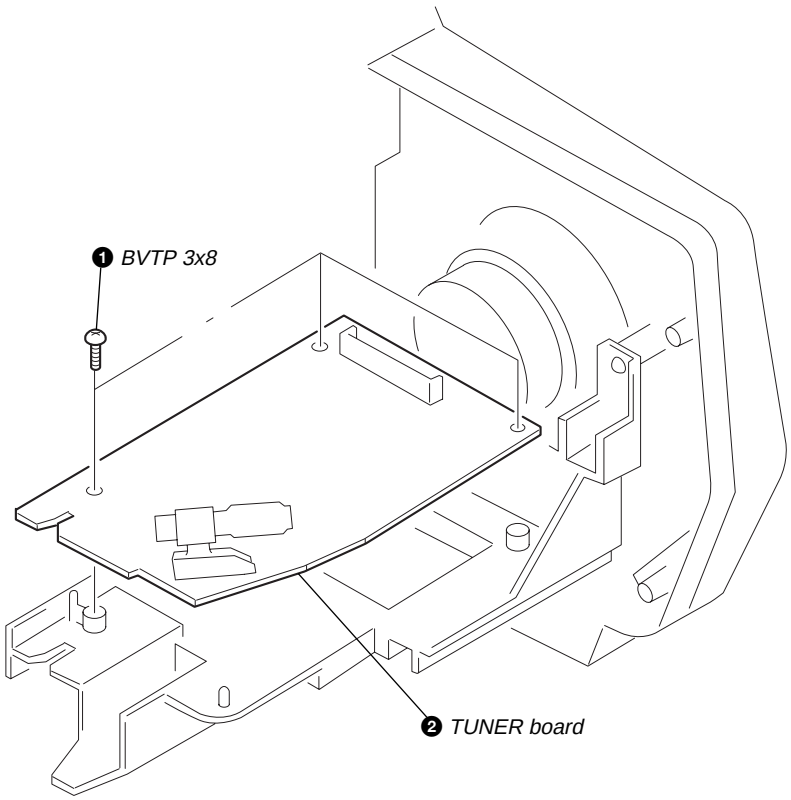
## 2-3. CABINET (UPPER) ASSY



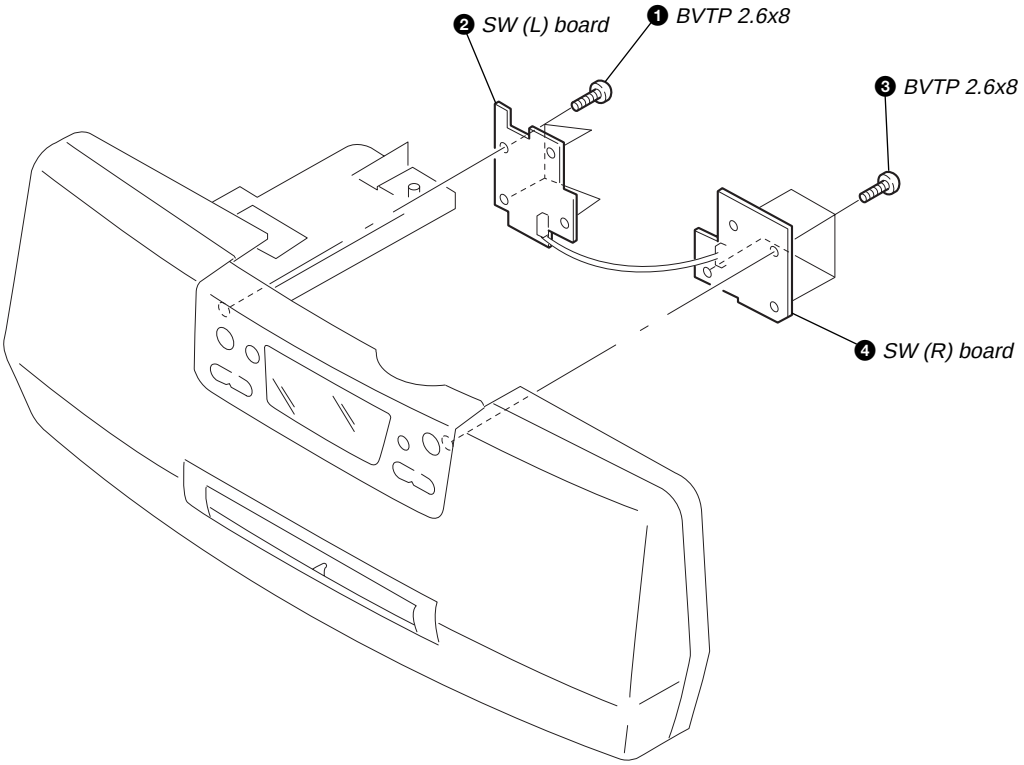

## 2-4. CD MECHANISM BLOCK



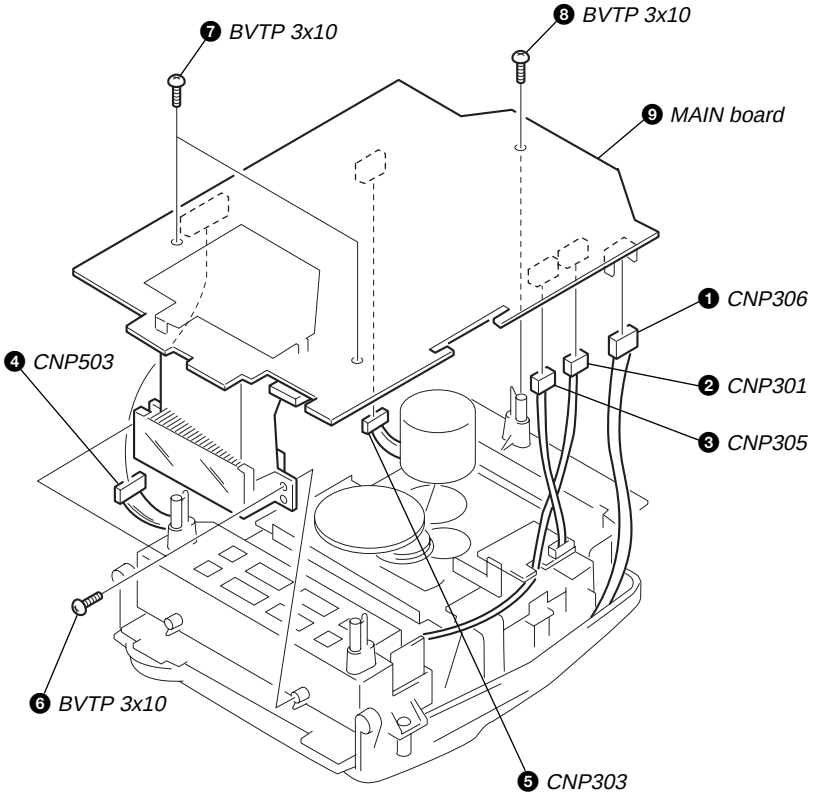
## 2-5. TUNER BOARD



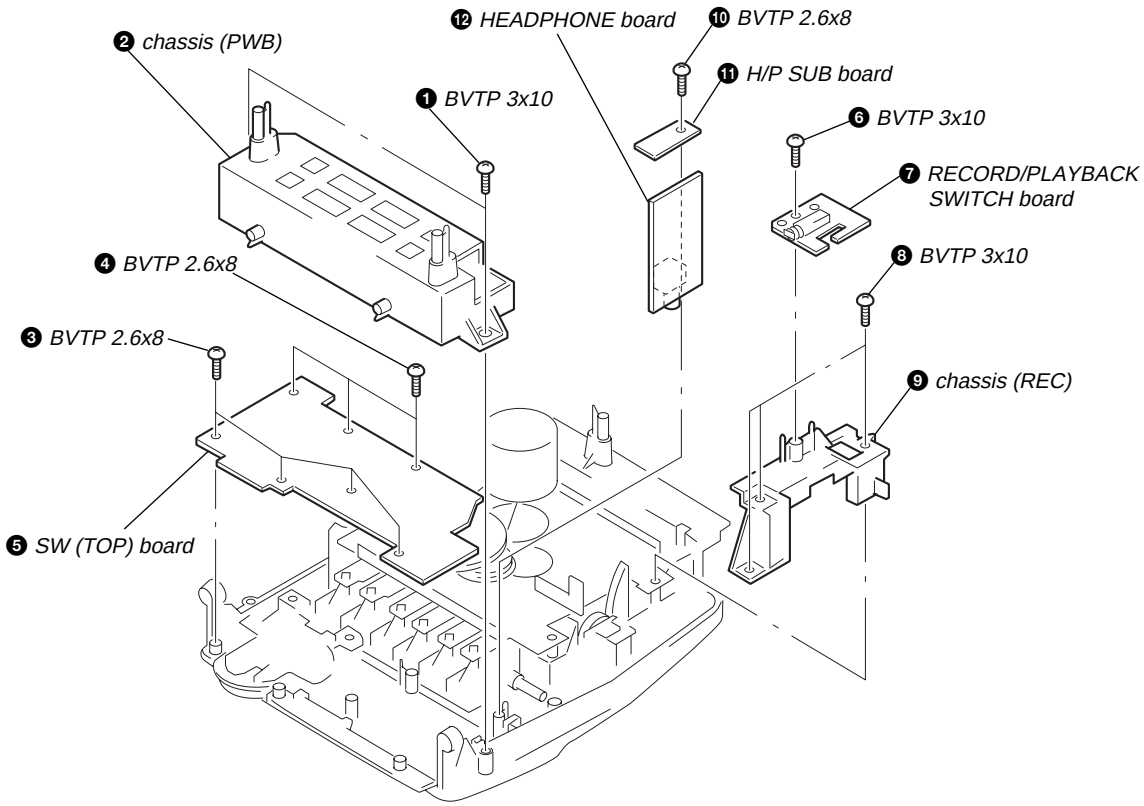

## 2-6. SW (L) BOARD, SW (R) BOARD



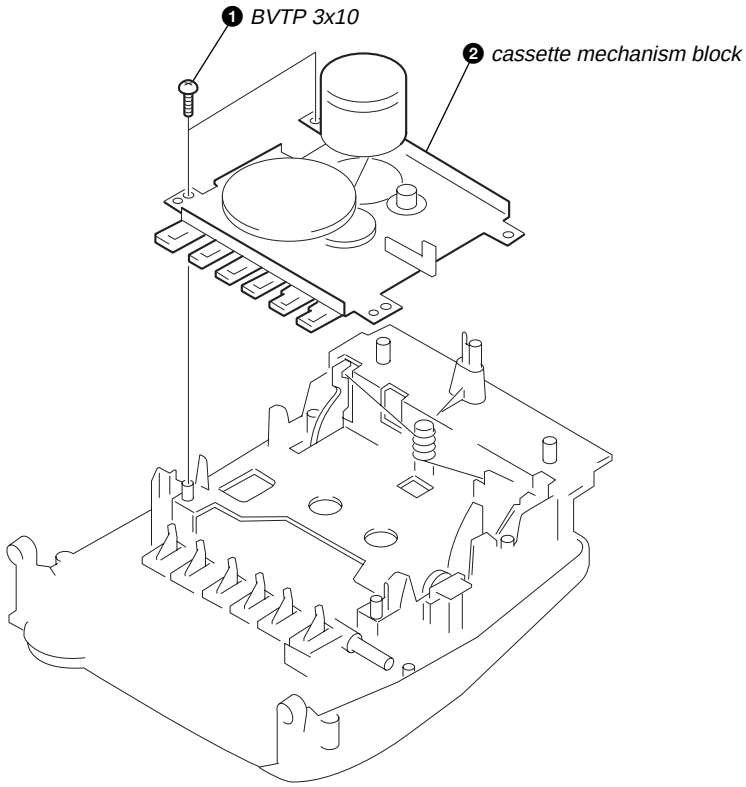
## 2-7. MAIN BOARD



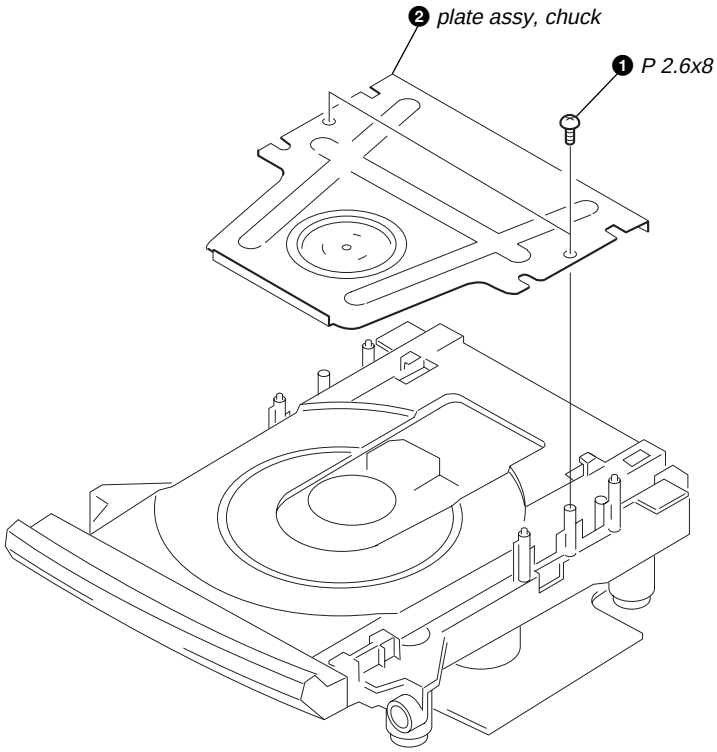

## 2-8. SW (TOP) BOARD, RECORD/PLAYBACK SWITCH BOARD, HEADPHONE BOARD



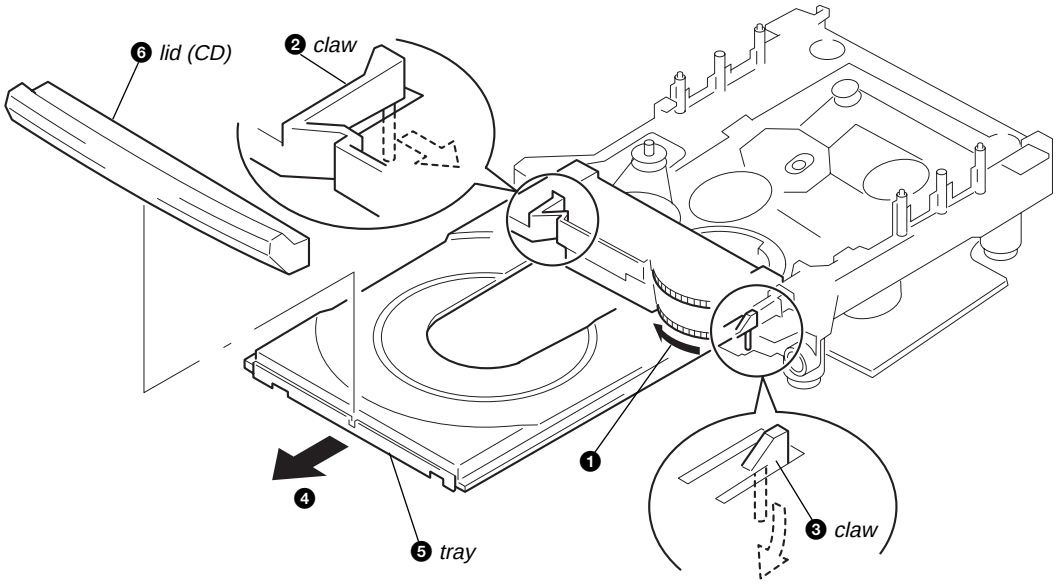
## 2-9. CASSETTE MECHANISM BLOCK



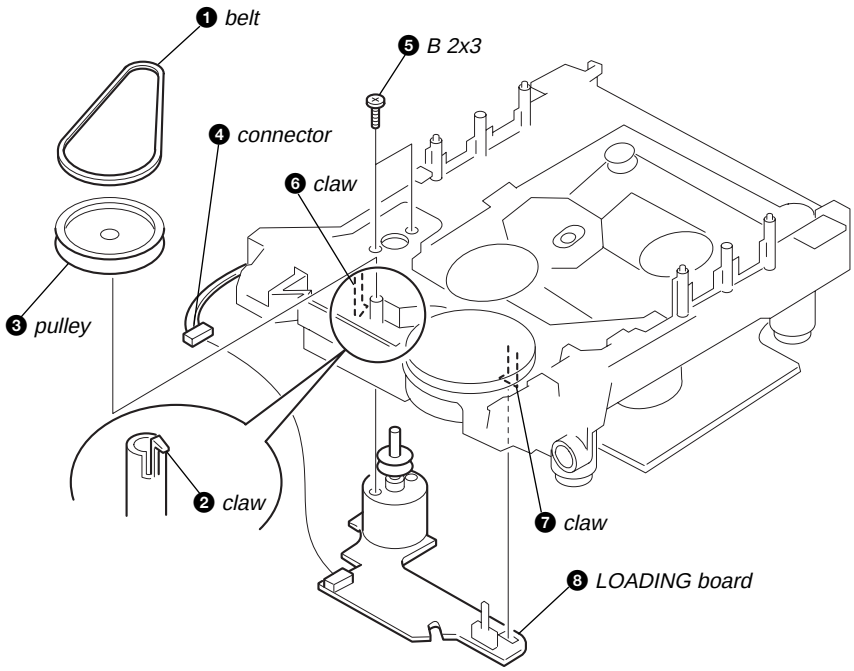

## 2-10. PLATE ASSY, CHUCK



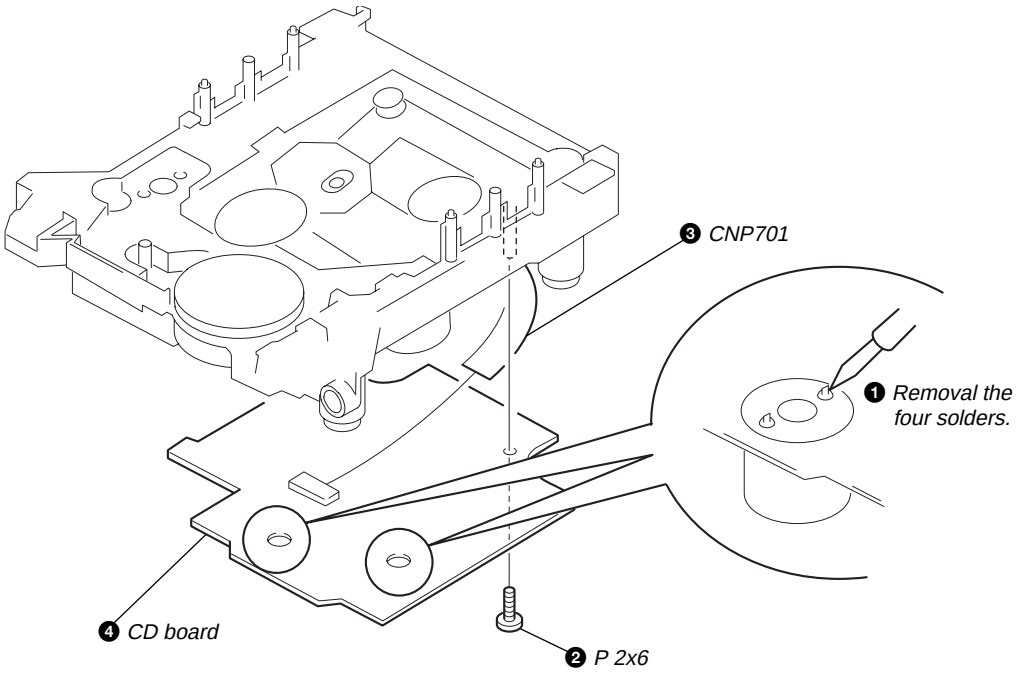
## 2-11. TRAY



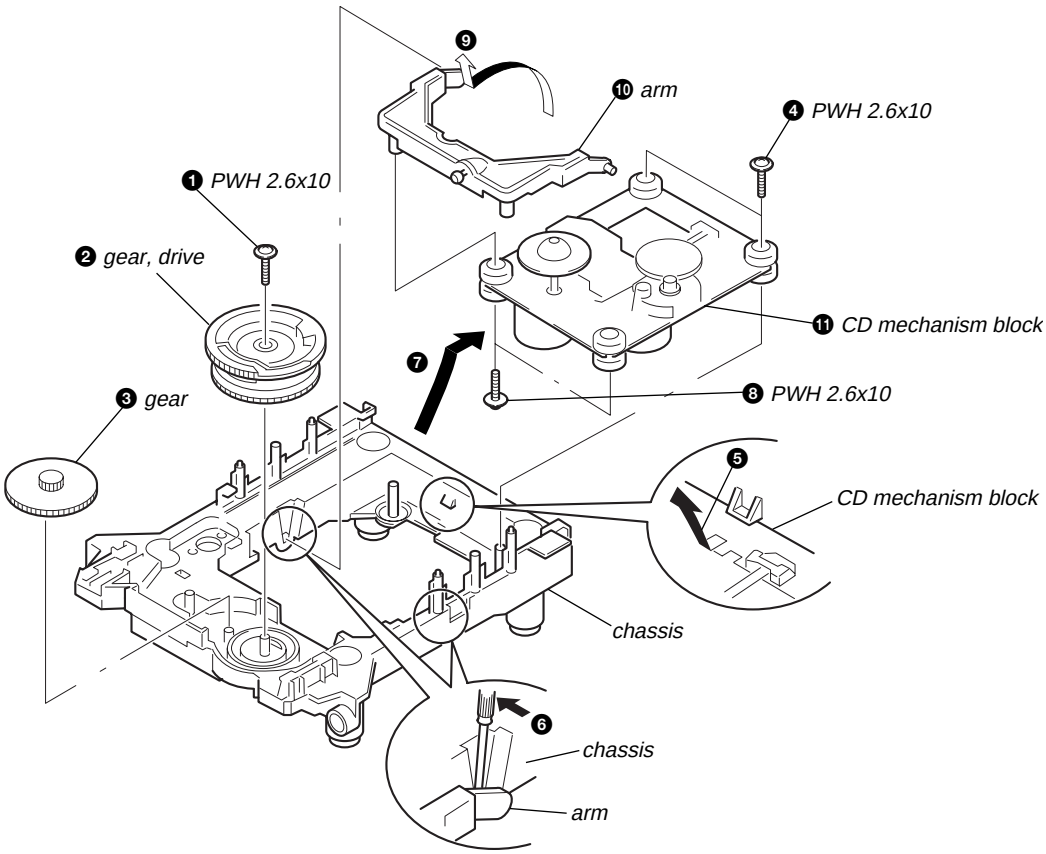

## 2-12. LOADING BOARD



## 2-13. CD BOARD




## 2-14. CD MECHANISM BLOCK



# SECTION 3
# MECHANICAL ADJUSTMENTS

## PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

| Mode | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-102C | 30 – 70 g • cm (0.42 – 0.97 oz • inch) |
| FWD Back Tension | CQ-102C | 1.5 – 5.5 g • cm (0.021 – 0.076 oz • inch) |
| FF | CQ-201B | more than 60 g • cm (more than 0.83 oz • inch) |
| REW | CQ-201B | more than 60 g • cm (more than 0.83 oz • inch) |

### Tape Tension Measurement

| Mode | Tension meter | Meter Reading |
|---|---|---|
| FWD | CQ-403A | more than 100 g (more than 3.53 oz) |

# SECTION 4
# ELECTRICAL ADJUSTMENTS

**TAPE SECTION** **0 dB = 0.775 V**

**• Standard Output Level**

| Output terminal | HP OUT |
|---|---|
| load impedance | 32 Ω |
| output signal level | 0.25 V (–10 dB) |

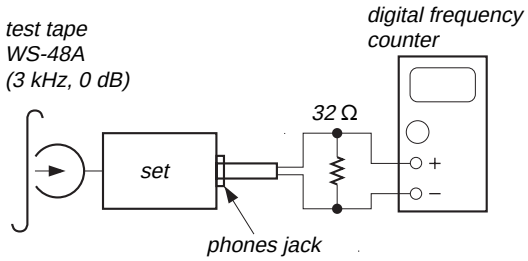
**• Test Tape**

| Type | Signal | Used for |
|---|---|---|
| WS-48A | 3 kHz, 0 dB | tape speed adjustment |

### Tape Speed Adjustment

**Procedure:**

Mode: playback



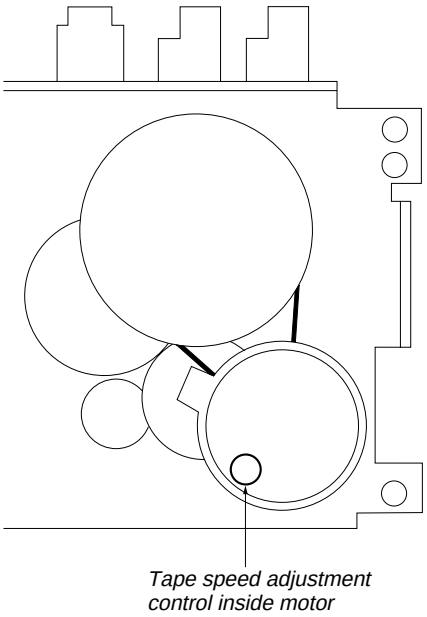

Adjust so that the value on the frequency counter is 3 kHz.

**Specification Value:**

| Digital frequency counter |
|---|
| 2,985 to 3,015 Hz |

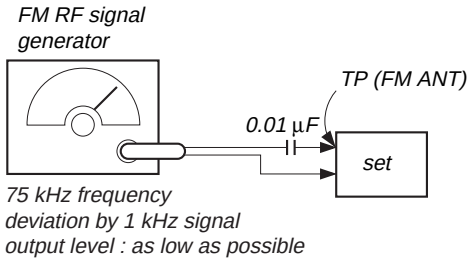
Adjust so that the frequency at the beginning and that at the end of tape winding are between 2,955 to 3,045 Hz.

**Adjustment Location:**

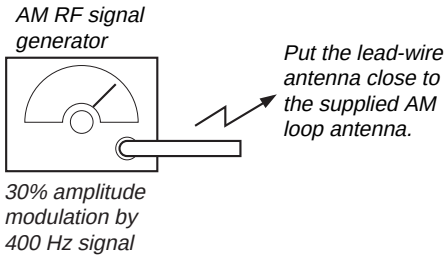


## TUNER SECTION | 0 dB = 1 µV

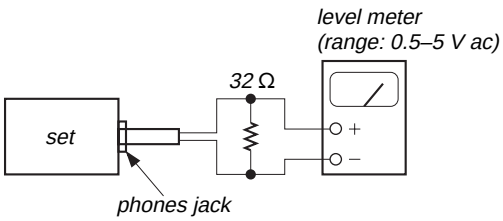
- **FM Section**
  **Setting:**
  BAND switch: FM



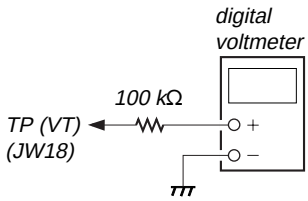

- **AM Section**
  **Setting:**
  BAND switch: AM


AM RF signal generator
Put the lead-wire antenna close to the supplied AM loop antenna.
30% amplitude modulation by 400 Hz signal

- **Connecting Level Meter (FM and AM)**




- **Connecting Digital Voltmeter (FM and AM)**




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

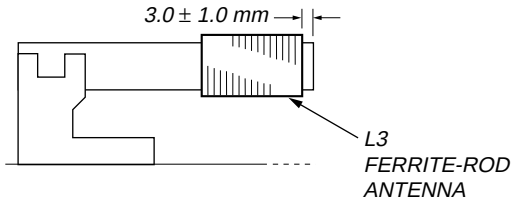
| FM FREQUENCY COVERAGE ADJUSTMENT | | |
|---|---|---|
| Frequency Display | 87.5 MHz | 108 MHz |
| Reading on Digital voltmeter | 1.7 ± 0.4 V | 4.1 ± 0.1V |
| Adjustment Part | <confirmation> | L2 |

| FM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter. | |
| L1 | CT1 |
| 87.5 MHz | 108 MHz |

| AM FREQUENCY COVERAGE ADJUSTMENT | | |
|---|---|---|
| Frequency Display | 530 kHz | 1,710 kHz |
| Reading on Digital voltmeter | 0.9 $^{+0.7\ V}_{-0.5\ V}$ | 4.8 $^{+1.2V}_{-0.6\ V}$ |
| Adjustment Part | <confirmation> | <confirmation> |

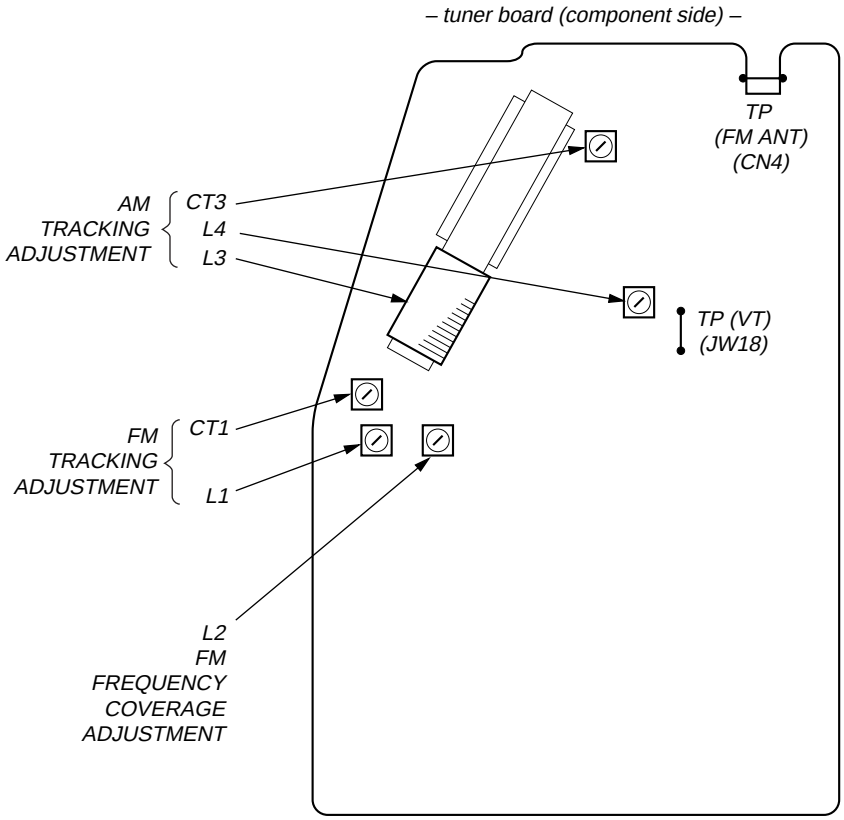
| AM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter. | |
| L4 | CT3 |
| 620 kHz | 1,400 kHz |

- For AM adjustment, fix the ferrite-rod antenna (L3) as shown below and then perform tracking adjustment at L4 and CT3. Lastly check the voltage.




**Adjustment Location:** See page 15.

**Adjustment Location:**




## CD SECTION

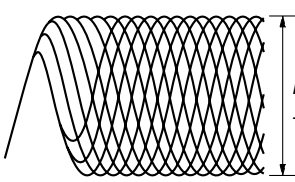
CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

### FOCUS BIAS CHECK

1. Connect the oscilloscope between IC701 pin ㉝ (TP RFO) and GND on CD board.
2. Insert the disc (YEDS-18). (Part No. : 3-702-101-01)
3. Press the ►II button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape ( ◇ ) in the center of the waveform can be clearly distinguished.

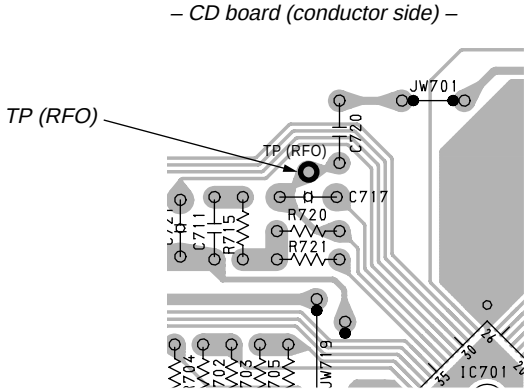
• RF signal reference waveform (eye pattern)

*VOLT/DIV : 200 mV (10 : 1 probe in use)*
*TIME/DIV : 500 nS*




When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

**Test Point:**



# SECTION 5
# DIAGRAMS

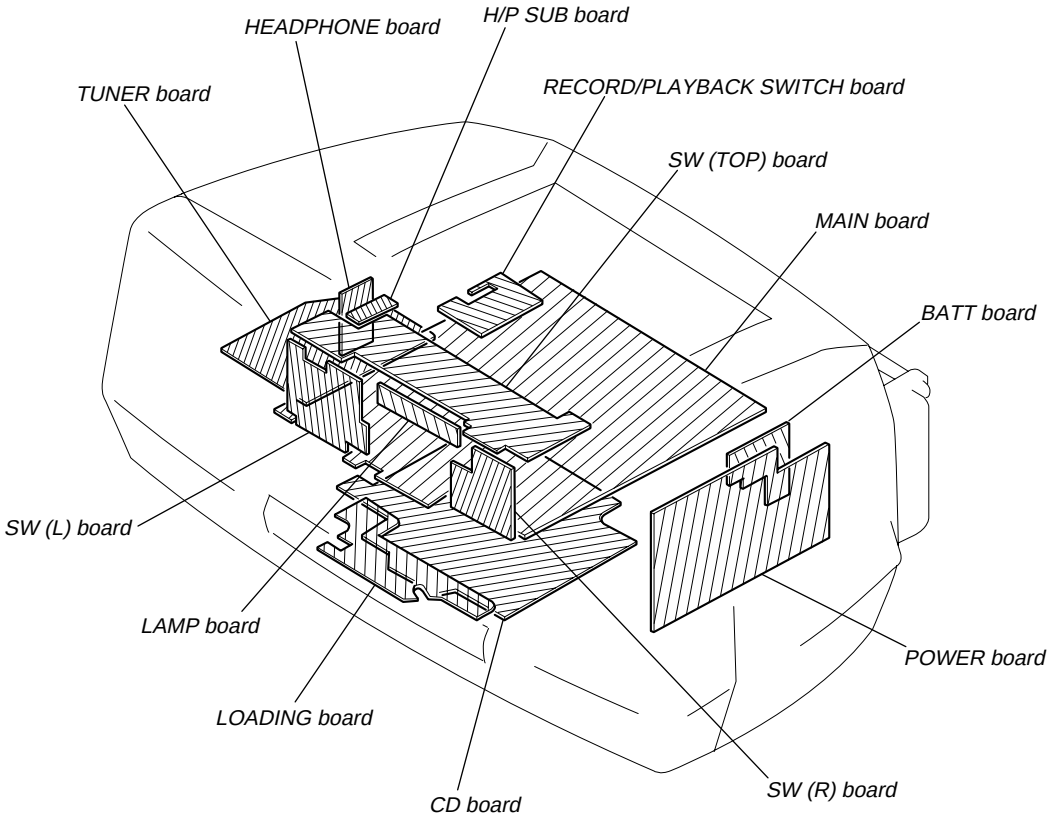
## 5-1. IC PIN DESCRIPTION

**• IC501 CXP83120A-035Q (SYSTEM CONTROL)**

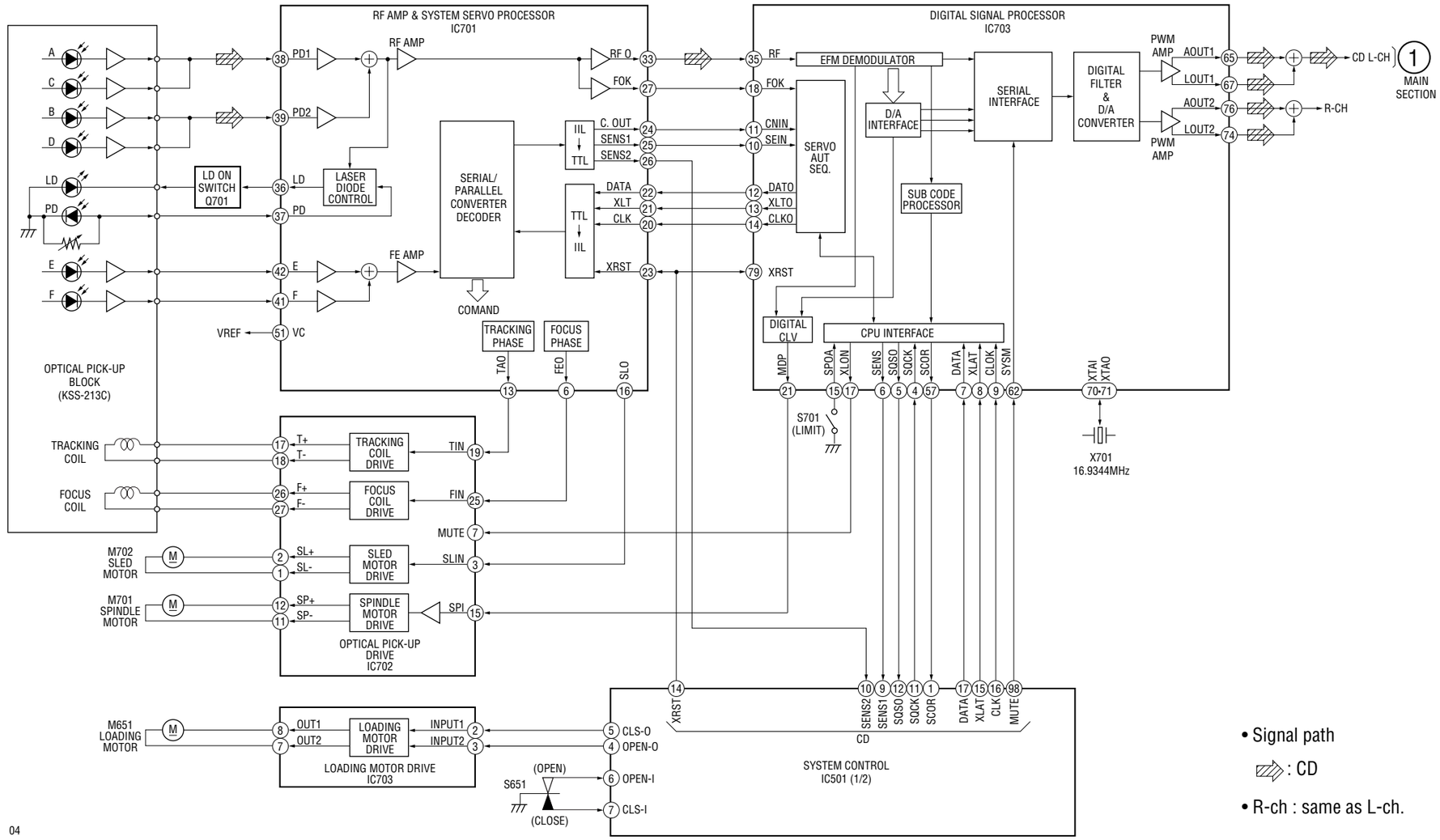
| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 1 | C-SCOR | I | CD SCOR input |
| 2 | WP | I | Wake-up input |
| 3 | RMC | I | Sircs receiver input |
| 4 | CLOSE-O | O | CD loading motor control output (Loading direction) |
| 5 | OPEN-O | O | CD loading motor control output (Eject direction) |
| 6 | OPEN-I | I | CD open switch input |
| 7 | CLOSE-I | I | CD close switch input |
| 8 | NC | — | Not used. |
| 9 | C-SENS1 | I | CD SENSE-1 input |
| 10 | C-SENS2 | I | CD SENSE-2 input |
| 11 | C-SQCK | O | CD Sub-Q read clock output |
| 12 | C-SQSO | I | CD Sub-Q data input |
| 13 | NC | — | Not used. |
| 14 | C-XRST | O | CD reset output |
| 15 | C-XLT | O | CD serial latch output |
| 16 | C-CLK | O | CD serial clock output |
| 17 | C-DATA | O | CD serial data output |
| 18 | R-ST | O | Stereo ingicator output |
| 19 | R-DATA | O | Tuner PLL data output |
| 20 | R-CLK | O | Tuner PLL clock output |
| 21 | R-COUNT | I | Tuner PLL data input |
| 22 | R-CE | O | Tuner PLL chip enable output |
| 23 | PCON | O | System power control output |
| 24 | V-DATA | O | Volume serial data output |
| 25 | V-CLK | O | Volume serial clock output |
| 26 | V-CE | O | Volume serial chip enable output |
| 27 | REG-CHK | I | Low voltage detection input |
| 28 | B/L-CONT | O | Back light control output |
| 29 | REC | I | Tape record signal input |
| 30 | INI | O | Tuner select initial setting output |
| 31 | LOCAL/DX | I | Input port for ANT sensitivity switching control on FM. (However, the LOCAL/DX function is finally deleted so it is not used.) |
| 32 | VERSION | I | Tuner destination band select input |
| 33 – 36 | KEY-1 – 4 | I | Key input |
| 37 | S-CLK | O | Shift clock output |
| 38 | RST | I | System reset input |
| 39 | EXTAL | I | Oscillation input (4.19 MHz) |
| 40 | XTAL | O | Oscillation output (4.19 MHz) |
| 41 | VSS | — | GND |
| 42 | NC | — | Not used. |
| 43 | VSS | — | GND |
| 44 | AVREF | I | A/D converter VREF input |
| 45 | AVSS | — | Analog GND |
| 46 | VL | O | LCD drive port ON/OFF output |
| 47 – 49 | VLC-3 – 1 | O | LCD drive voltege terminal |
| 50 – 53 | COM0 – 3 | O | LCD drive common output |
| 54 – 76 | SEG0 – 22 | O | LCD drive segment output |
| 77 – 79 | — | — | Not used. |
| 80 | F-TAPE | O | Tape power select control output |
| 81 | F-TU | O | Tuner power select control output |
| 82 | F-CD | O | CD power select control output |

| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 83 | LED ROCK | O | LED (ROCK) drive signal output |
| 84 | LED POP | O | LED (POP) drive signal output |
| 85 | LED LIVE | O | LED (LIVE) drive signal output |
| 86 | LED VOCAL | O | LED (VOCAL) drive signal output |
| 87, 88 | NC | — | Not used. |
| 89 | VDD | — | Power supply pin (+5 V) |
| 90 | NC | — | Not used. |
| 91 | VSS | — | GND |
| 92 | TX | O | Oscillation output (32.768 kHz) |
| 93 | TEX | I | Oscillation input (32.768 kHz) |
| 94 | ISS1 | O | Tape ISS1 control output |
| 95 | ISS2 | O | Tape ISS2 control output |
| 96 | A-MUTE | O | Audio mute output |
| 97 | R-MUT | O | Tuner mute output |
| 98 | C-MUT | O | CD mute output |
| 99 | TC1 | I | Tape play switch input |
| 100 | — | — | Not used (Connect to GND). |

## 5-2. CIRCUIT BOARDS LOCATION



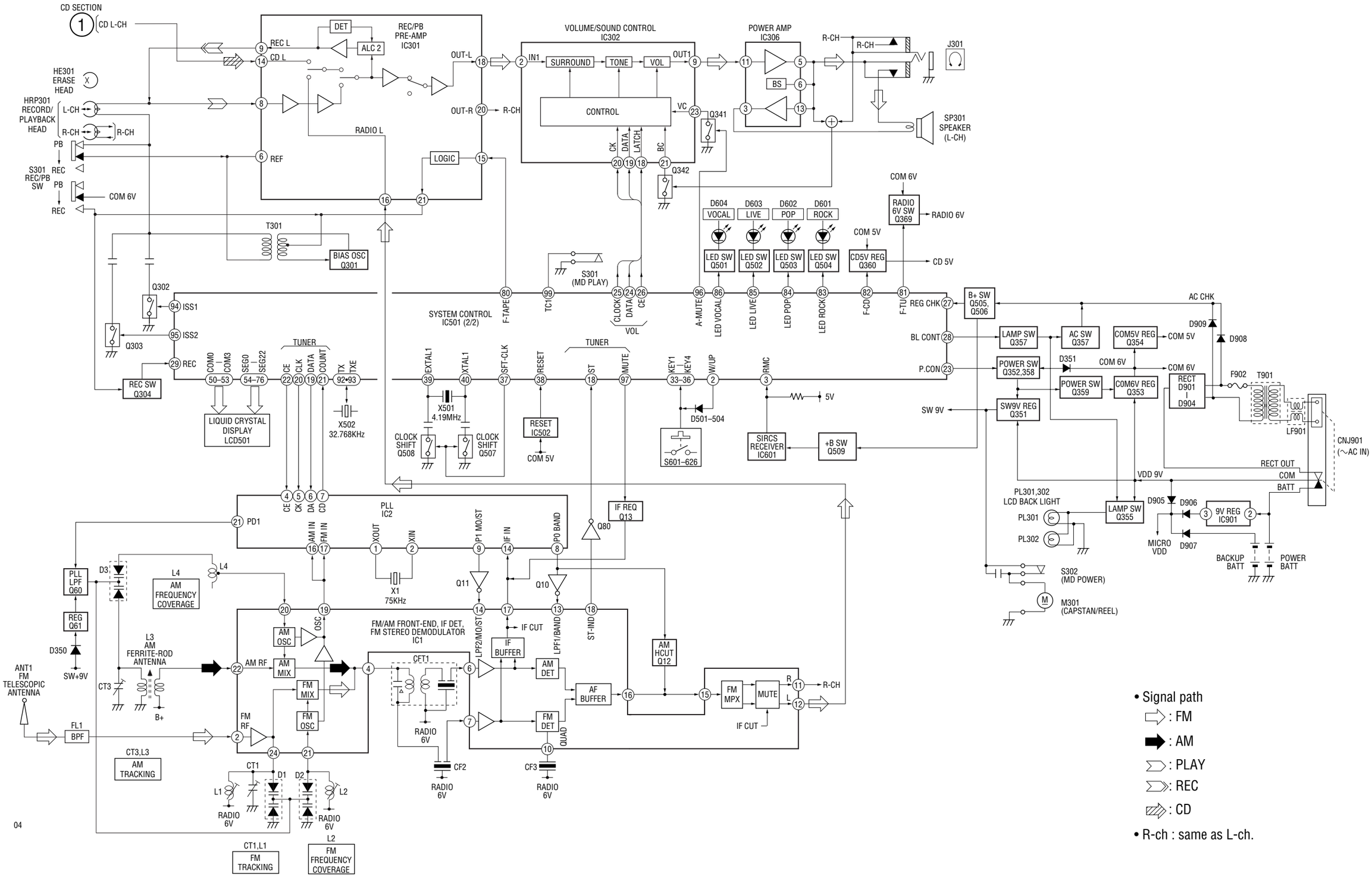
## 5-3. BLOCK DIAGRAM — CD SECTION —




04

- Signal path
  : CD
- R-ch : same as L-ch.

## 5-4. BLOCK DIAGRAM — MAIN SECTION —



• **Semiconductor Location**

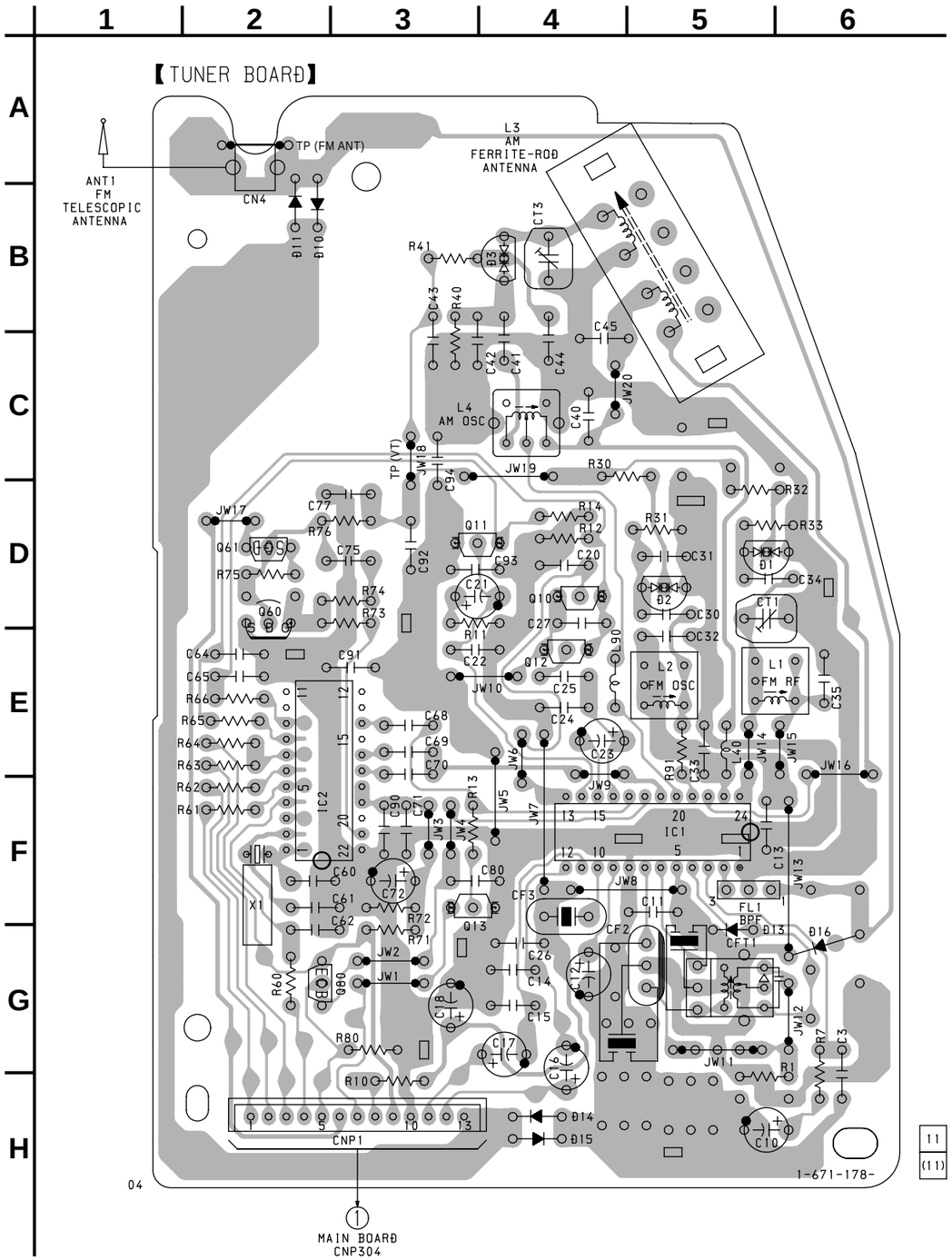
| Ref. No. | Location |
|---|---|
| D1 | D-5 |
| D2 | D-5 |
| D3 | B-4 |
| D10 | B-2 |
| D11 | B-2 |
| D13 | G-5 |
| D14 | H-4 |
| D15 | H-4 |
| D16 | G-6 |
| | |
| IC1 | F-5 |
| IC2 | F-2 |
| | |
| Q10 | D-4 |
| Q11 | D-3 |
| Q12 | E-4 |
| Q13 | F-3 |
| Q60 | D-2 |
| Q61 | D-2 |
| Q80 | G-2 |

**Note on Printed Wiring Boards:**
- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

**Note on Schematic Diagram:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
- Abbreviation
  SP : Singapore model.

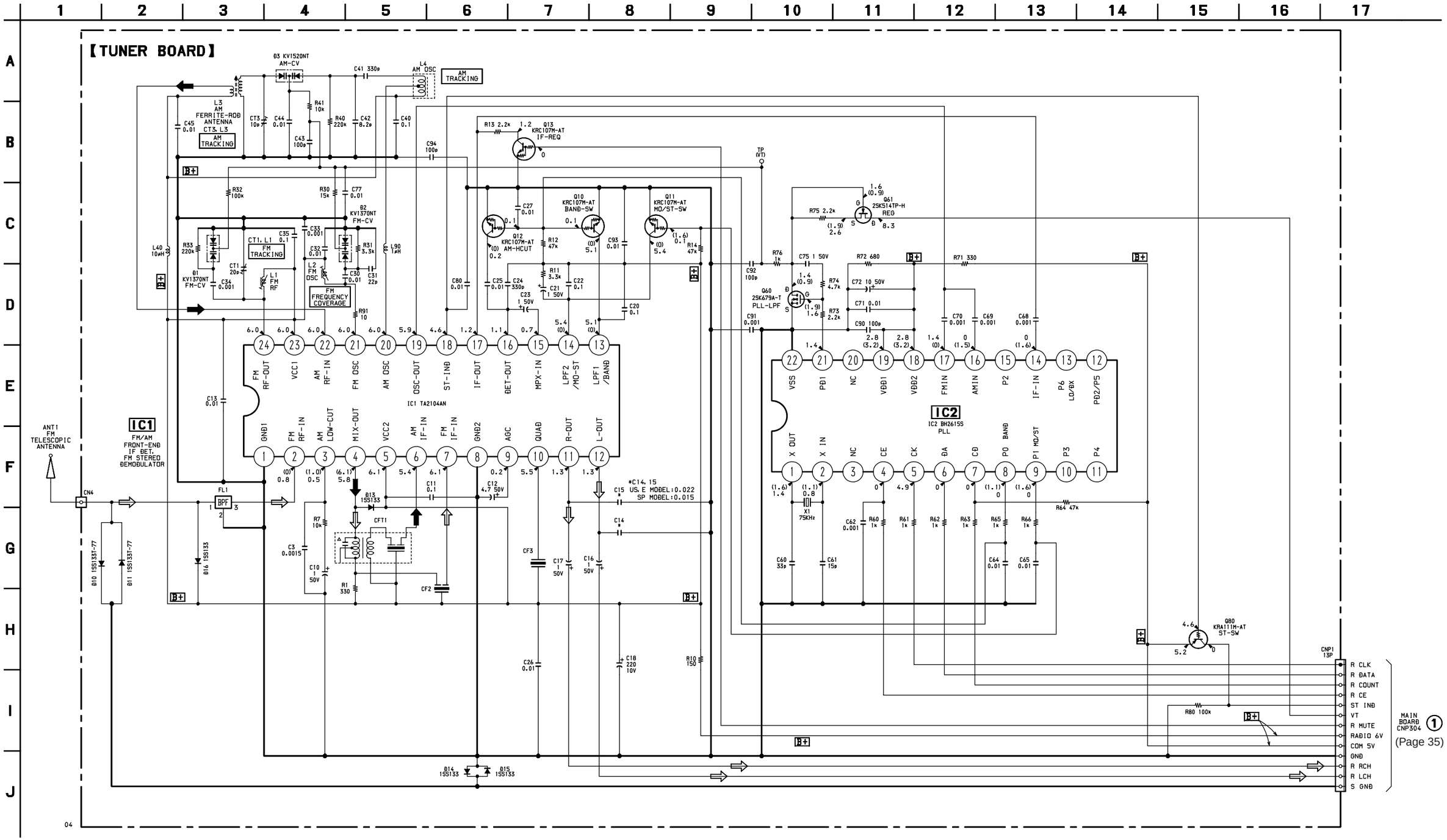


**5-5. PRINTED WIRING BOARD — TUNER SECTION — • Refer to page 18 for Circuit Boards Location.**

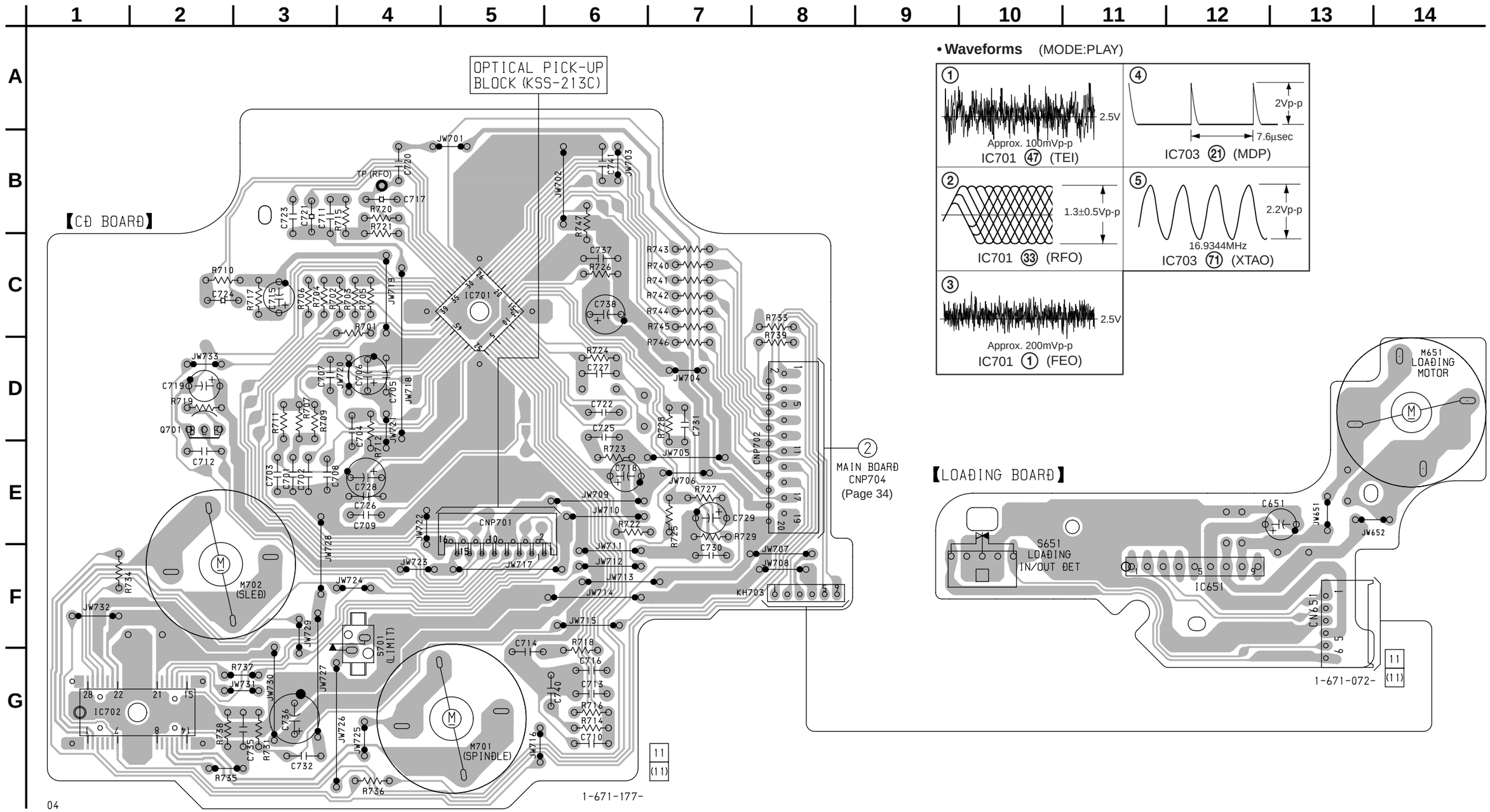



(Page 34)

## 5-6. SCHEMATIC DIAGRAM — TUNER SECTION — • Refer to page 41 for IC Block Diagrams.



**5-7. PRINTED WIRING BOARDS — CD SECTION — • Refer to page 18 for Circuit Boards Location.**




• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| IC651 | F-12 |
| IC701 | C-5 |
| IC702 | G-2 |
| Q701 | D-2 |

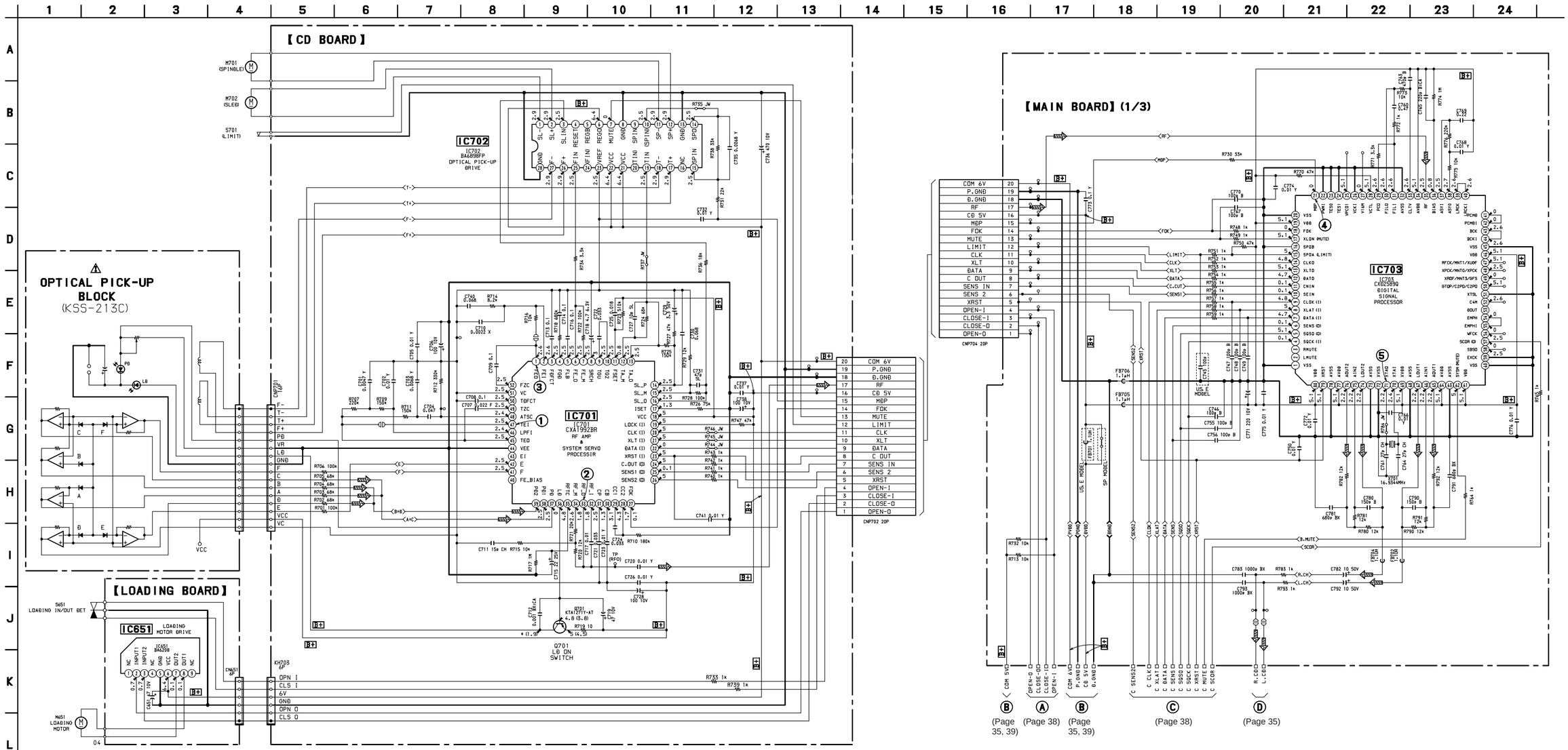
**Note on Printed Wiring Boards:**
- o——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

**Note on Schematic Diagram:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
- Abbreviation
  SP : Singapore model.

5-8. SCHEMATIC DIAGRAM — CD SECTION — • Refer to page 42 for IC Block Diagrams.

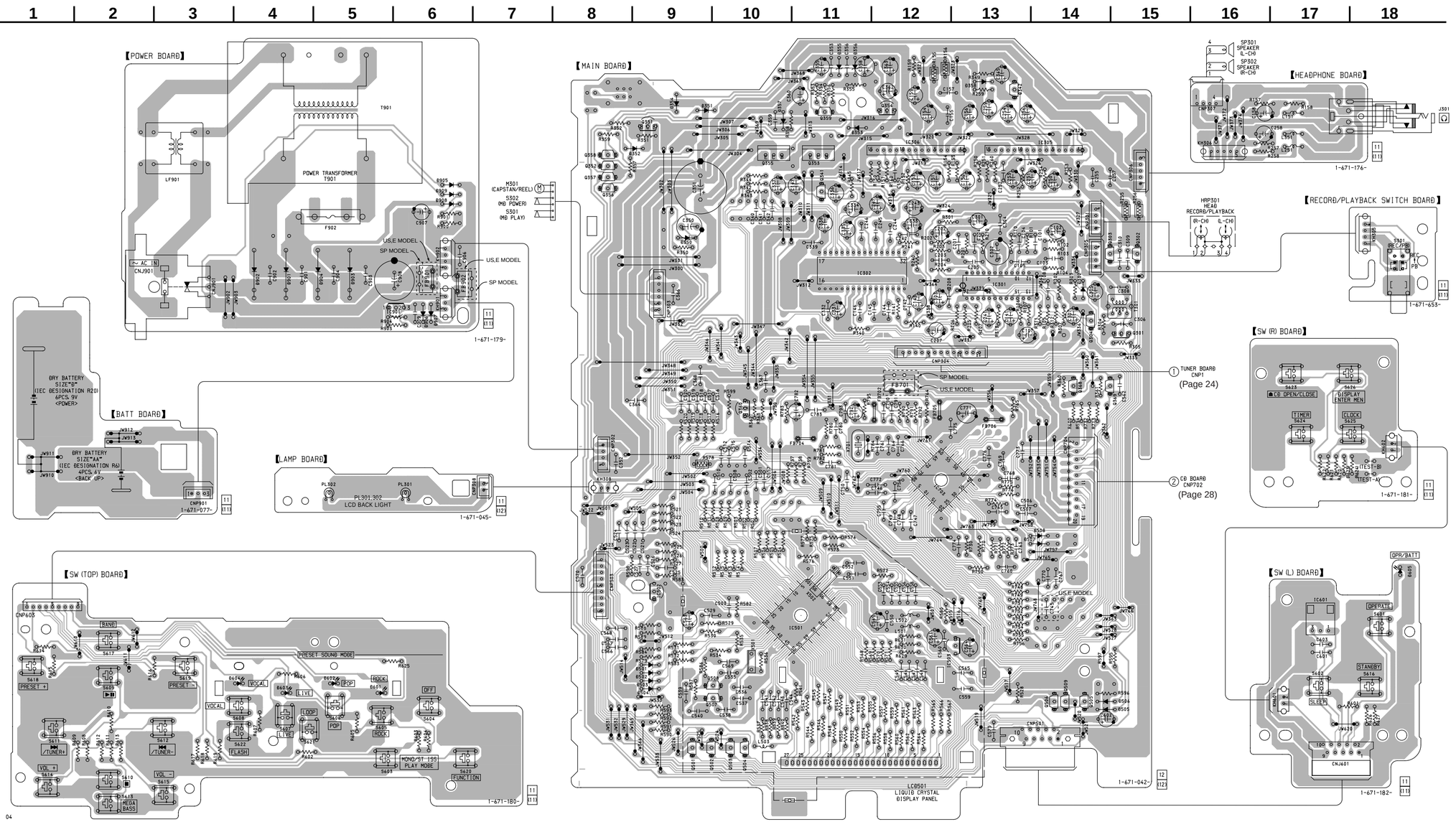


## 5-9. PRINTED WIRING BOARDS — MAIN SECTION — • Refer to page 18 for Circuit Boards Location.

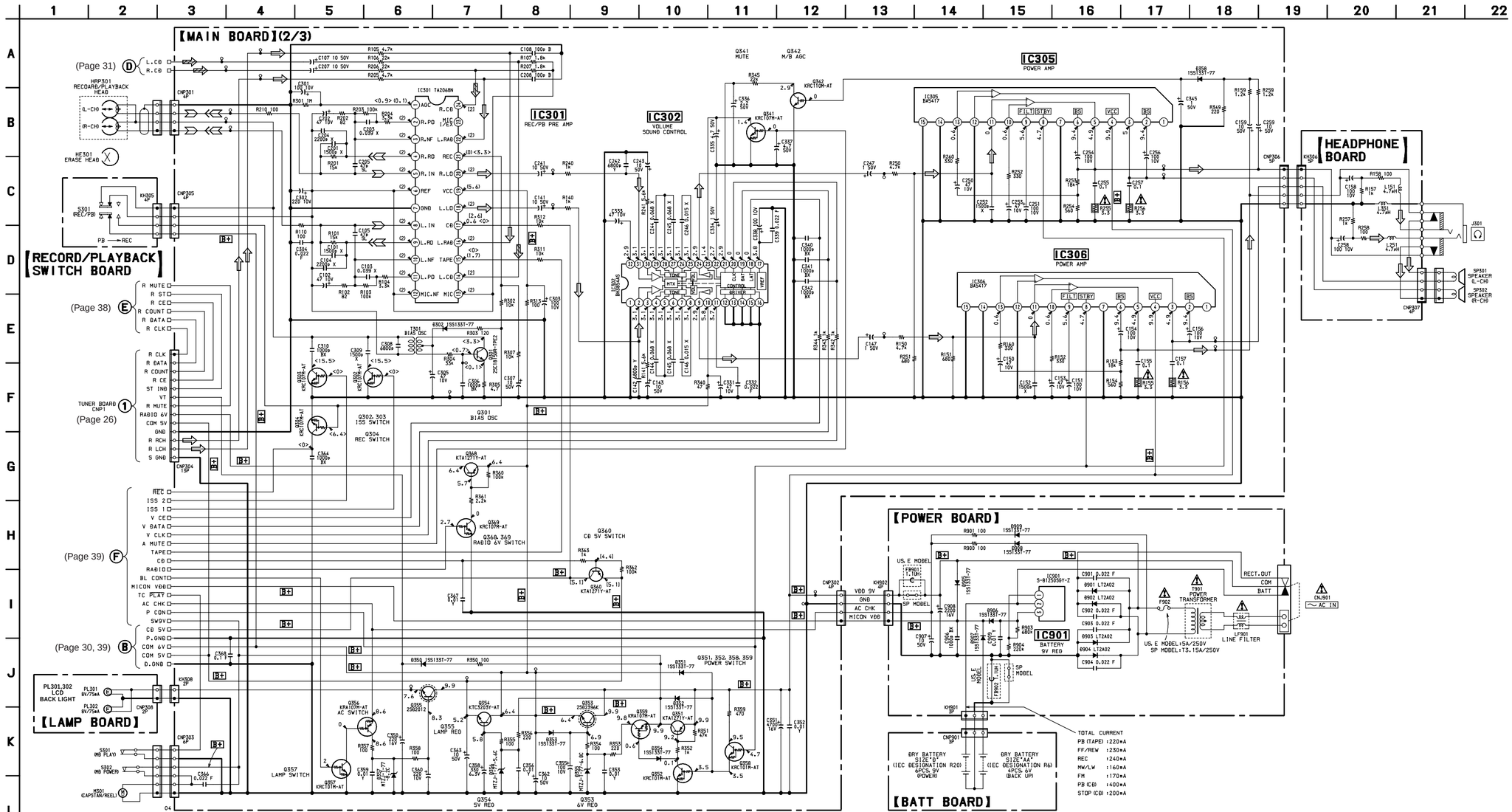
• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D302 | D-14 |
| D350 | C-9 |
| D351 | B-9 |
| D352 | B-9 |
| D353 | B-11 |
| D354 | B-9 |
| D355 | A-11 |
| D356 | A-11 |
| D357 | B-10 |
| D358 | A-13 |
| D501 | I-9 |
| D502 | I-9 |
| D503 | I-9 |
| D504 | I-9 |
| D505 | I-15 |
| D506 | I-15 |
| D507 | G-13 |
| D508 | G-14 |
| D601 | I-5 |
| D602 | I-5 |
| D603 | I-4 |
| D604 | I-4 |
| D901 | D-4 |
| D902 | D-4 |
| D903 | D-5 |
| D904 | D-5 |
| D905 | C-6 |
| D906 | D-6 |
| D907 | D-6 |
| D908 | C-6 |
| D909 | C-6 |
| IC301 | D-13 |
| IC302 | D-11 |
| IC305 | B-14 |
| IC306 | B-12 |
| IC501 | H-11 |
| IC502 | H-9 |
| IC503 | I-12 |
| IC703 | F-12 |
| IC901 | D-6 |
| Q301 | D-15 |
| Q302 | C-15 |
| Q303 | C-14 |
| Q304 | D-14 |
| Q341 | B-11 |
| Q342 | A-13 |
| Q351 | B-9 |
| Q352 | B-8 |
| Q353 | B-11 |
| Q354 | B-12 |
| Q355 | B-10 |
| Q356 | C-8 |
| Q357 | B-8 |
| Q358 | B-8 |
| Q359 | B-11 |
| Q360 | E-10 |
| Q368 | E-14 |
| Q369 | E-15 |
| Q501 | J-9 |
| Q502 | J-9 |
| Q503 | J-10 |
| Q504 | J-10 |
| Q505 | I-14 |
| Q506 | I-14 |
| Q507 | I-9 |
| Q508 | I-9 |
| Q509 | I-14 |

**Note:**
- ⟜——: parts extracted from the component side.
- ▒▒▒: Pattern from the side which enables seeing.
- Abbreviation
  SP : Singapore model.



**5-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 41 for IC Block Diagrams.**

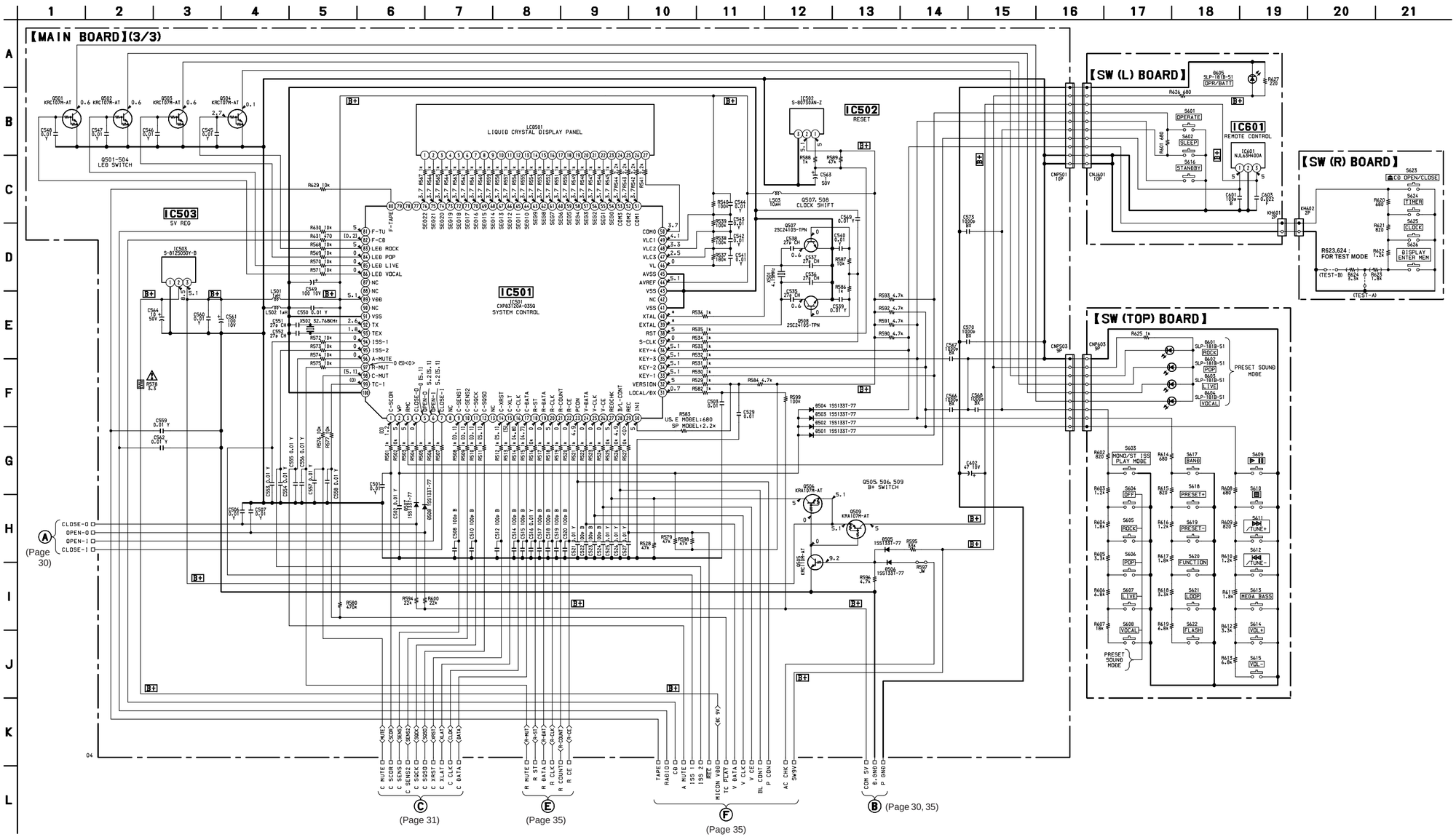



**Note:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line.
- Total current is measured with no cassette installed.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : COMMON
  ( ) : TAPE (PB)
  < > : TAPE (REC)
  [ ] : CD STOP
- Signal path.
  ⇨ : FM
  ⇨ : PB
  ⇨ : REC
  ⇨ : CD
- Abbreviation
  SP : Singapore model.

## 5-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) —



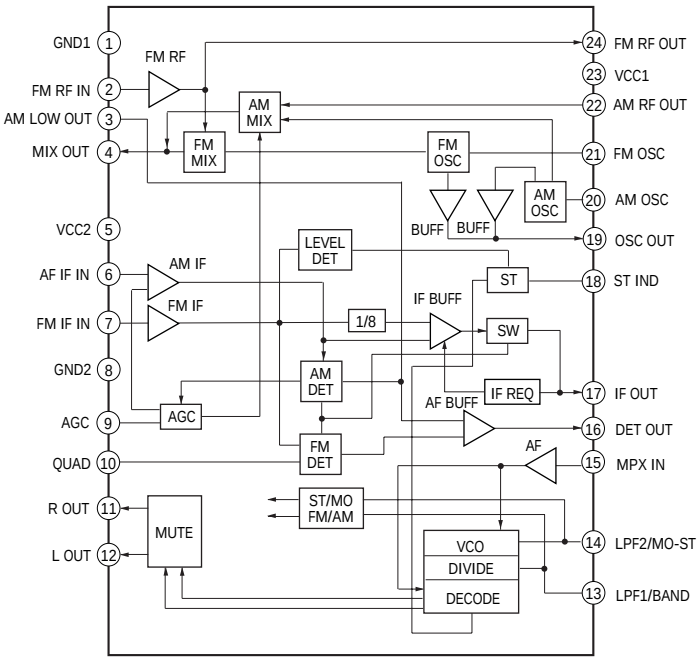

**Note:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- [ ] : panel designation.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

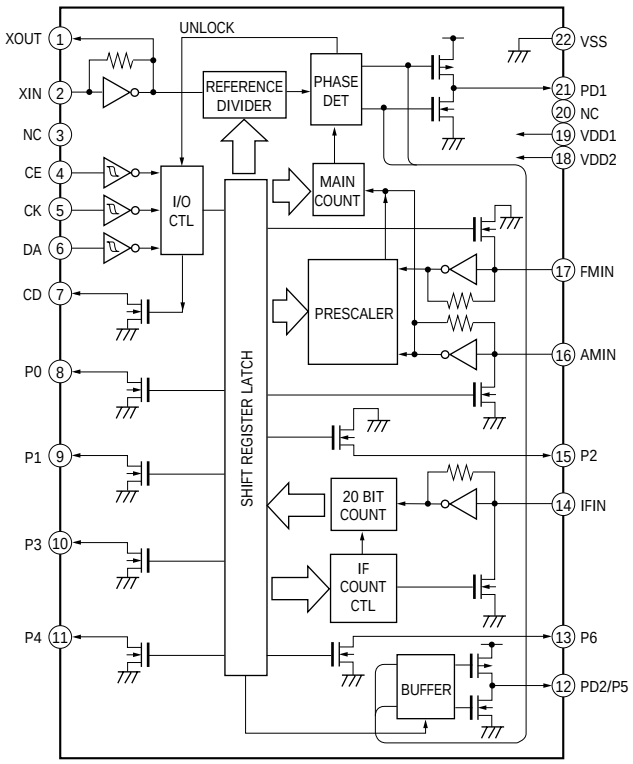
- [B+] : B+ Line.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : TAPE (PB)
  < > : TAPE (REC)
  [ ] : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  SP : Singapore model.

**• IC Block Diagrams**

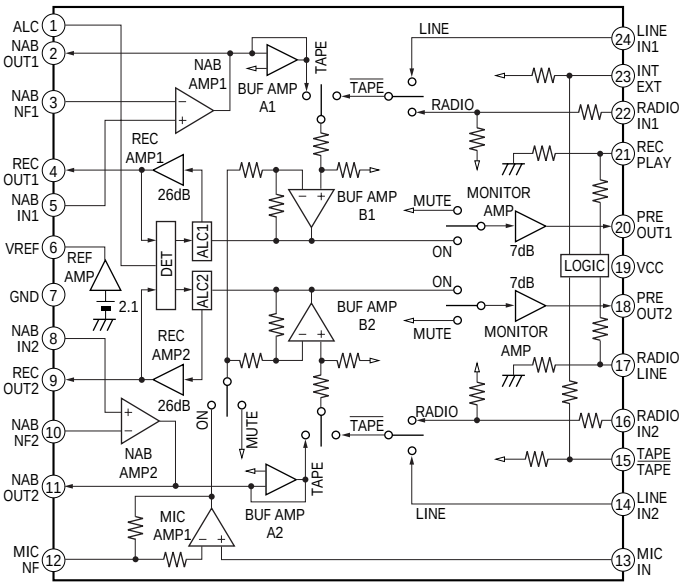
**IC1 TA2104AN**



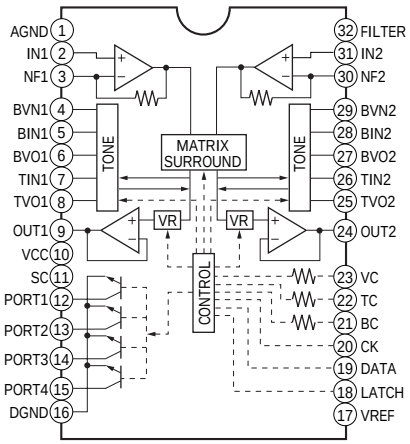

**IC2 BH2615S**



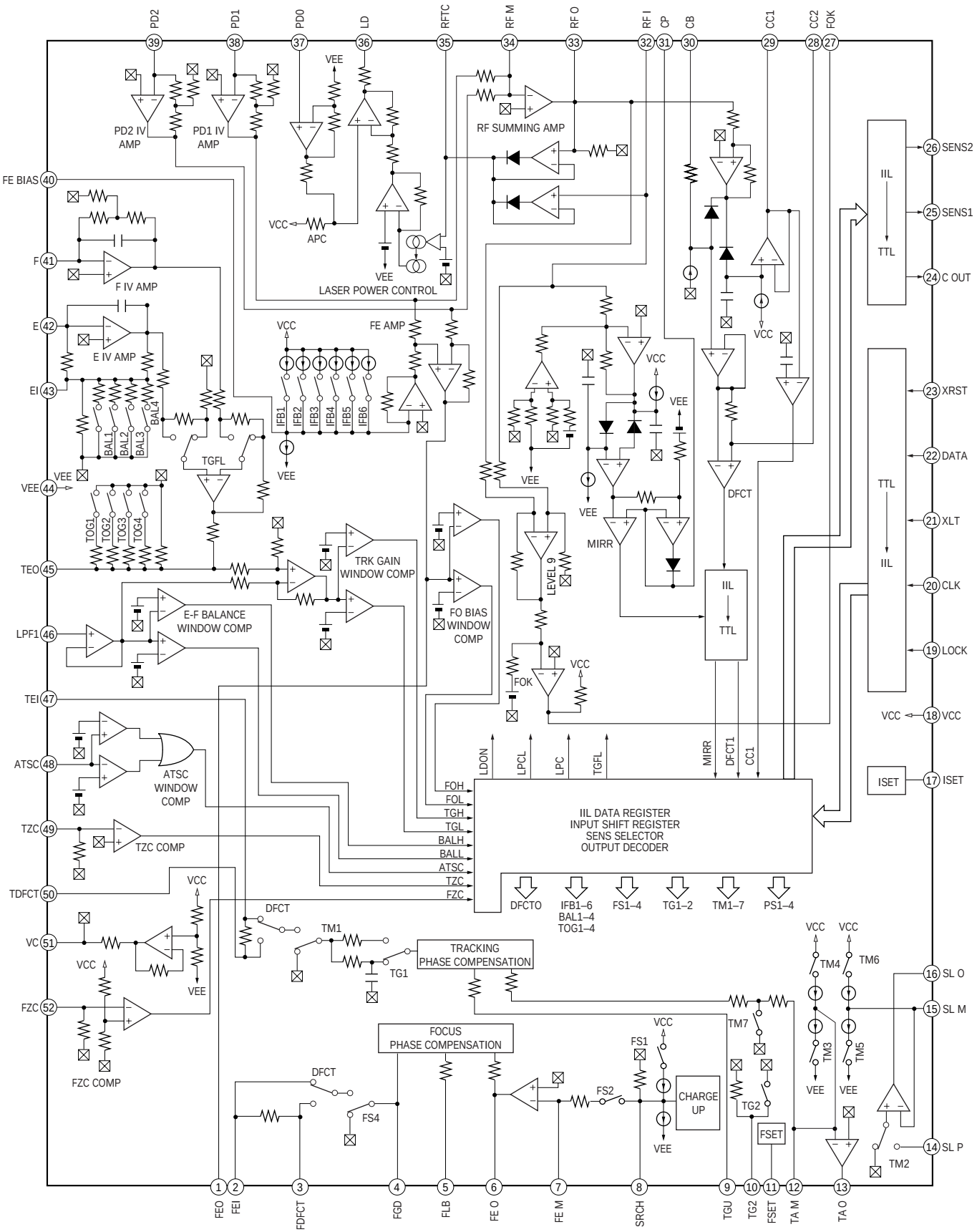

**IC301 TA2068N**



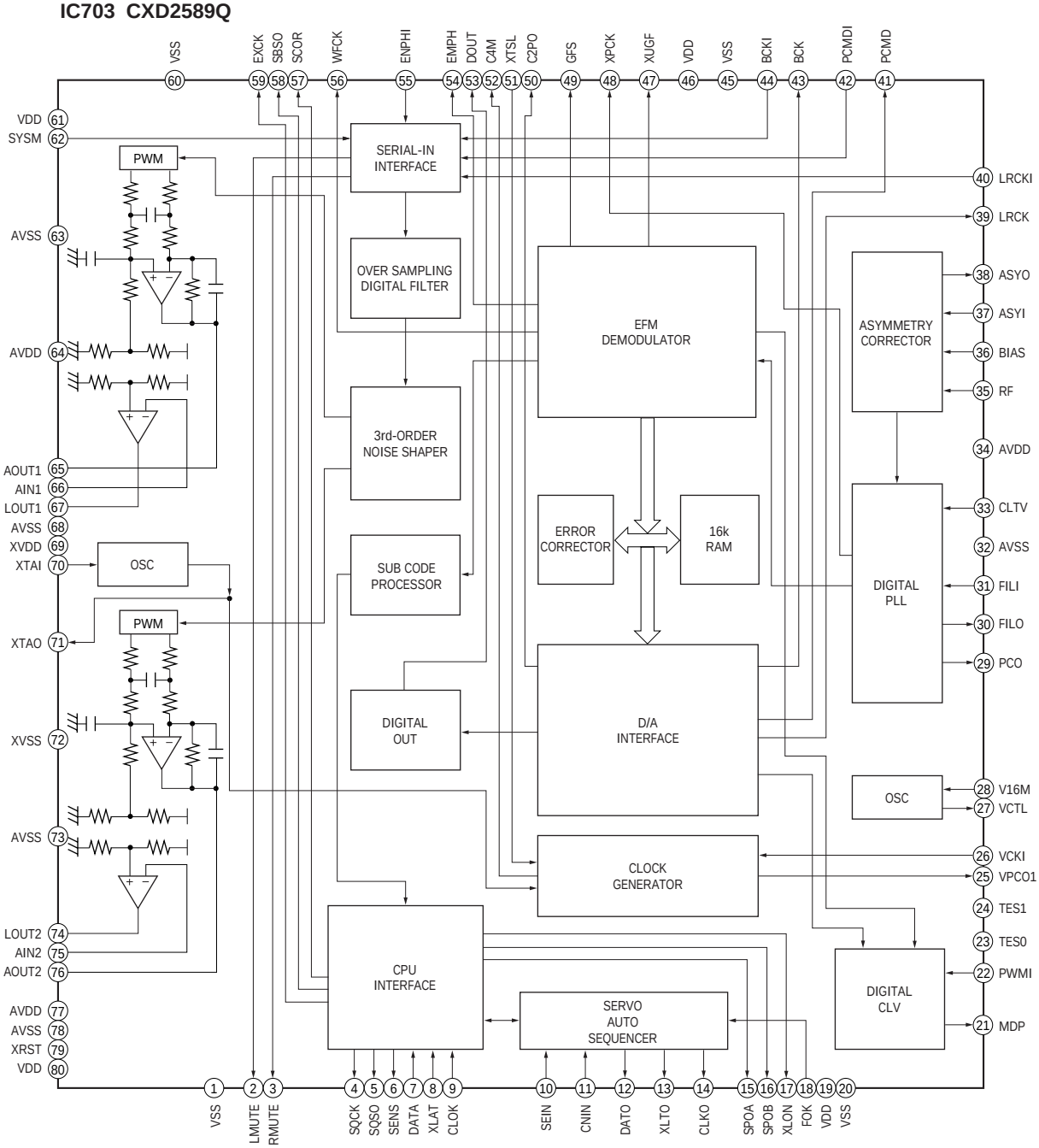

**IC302 BH3854AFS**



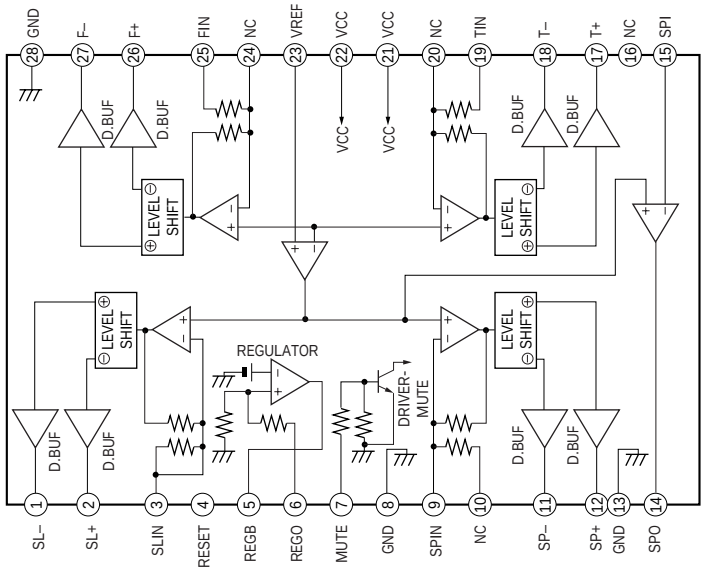
**IC701 CXA1992BR**



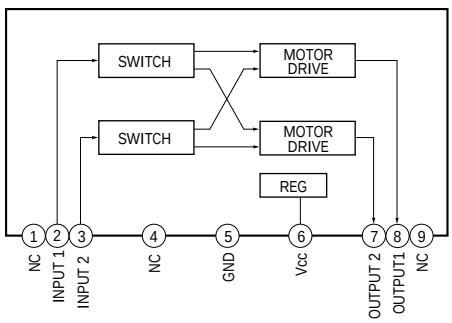
## IC703 CXD2589Q




## IC702 BA6898FP




## IC651 BA6208

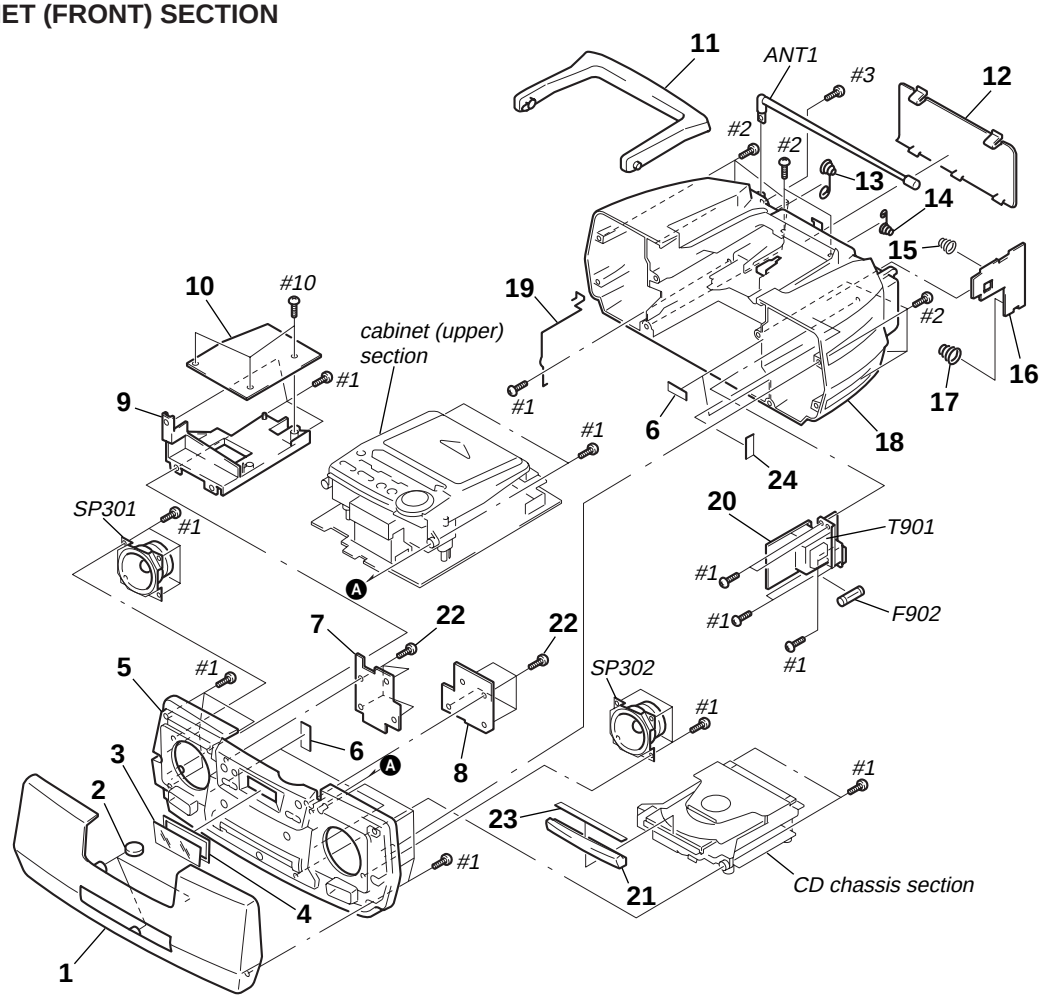


# SECTION 6
# EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  SP : Singapore model
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

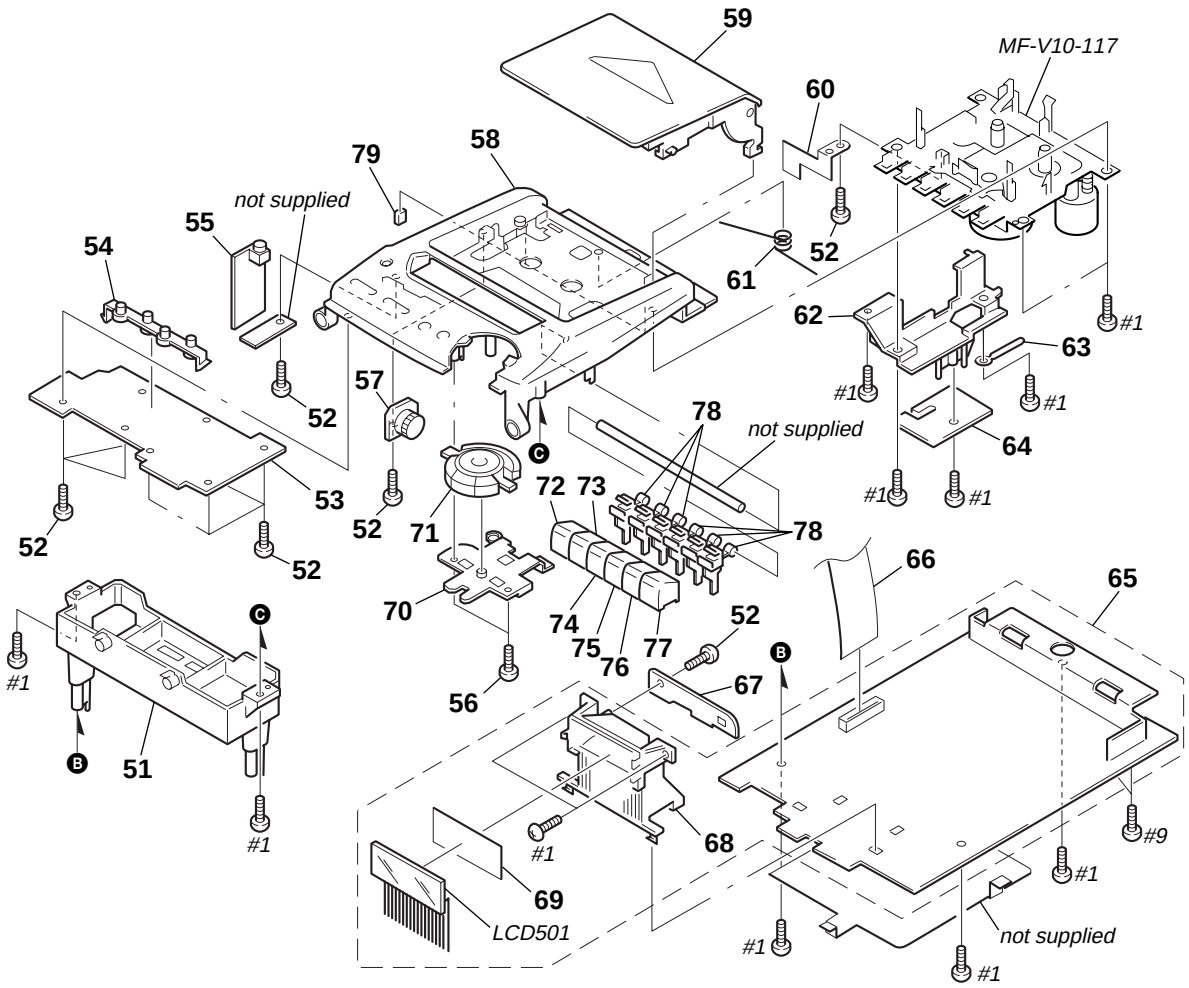
## 6-1. CABINET (FRONT) SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-3376-102-1 | PANEL (FRONT) ASSY (BLACK) (US) | |
| 1 | X-3376-251-1 | PANEL (FRONT) ASSY (DARK BLUE) | |
| 2 | 4-212-330-01 | BUSHING | |
| 3 | 3-028-128-01 | WINDOW (LCD) | |
| * 4 | 3-028-140-01 | SHEET, ADHESIVE | |
| 5 | X-3376-389-1 | CABINET (FRONT) ASSY | |
| 6 | 3-831-441-99 | CUSHION, SPEAKER | |
| * 7 | 1-671-182-11 | SW (L) BOARD | |
| * 8 | 1-671-181-11 | SW (R) BOARD | |
| * 9 | 3-028-107-01 | CHASSIS (TU) | |
| * 10 | A-3321-667-A | TUNER BOARD, COMPLETE (US,E) | |
| * 10 | A-3321-920-A | TUNER BOARD, COMPLETE (SP) | |
| 11 | 3-028-168-01 | HANDLE | |
| 12 | 4-982-685-01 | LID, BATTERY CASE | |
| 13 | 3-029-701-01 | SPRING (+-), TERMINAL COIL | |
| 14 | 3-028-157-01 | TERMINAL (S) (+.-), BATT | |
| 15 | 3-028-154-01 | TERMINAL (-), BATT | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 16 | 1-671-077-11 | BATT BOARD | |
| 17 | 3-028-156-01 | TERMINAL (S) (-), BATT | |
| 18 | 3-028-105-11 | CABINET (REAR) (US,E) | |
| 18 | 3-028-105-41 | CABINET (REAR) (SP) | |
| 19 | 3-028-134-01 | TERMINAL, ANTENNA | |
| * 20 | 1-671-179-11 | POWER BOARD | |
| 21 | 3-028-153-01 | LID (CD) | |
| 22 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 23 | 3-030-742-01 | COVER, CD LID | |
| * 24 | 3-703-044-26 | LABEL, CAUTION (US) | |
| ANT1 | 1-501-480-11 | ANTENNA, TELESCOPIC | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15AL/250V) (SP) | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) (US,E) | |
| SP301 | 1-529-131-11 | SPEAKER (8cm) (L-CH) | |
| SP302 | 1-529-131-11 | SPEAKER (8cm) (R-CH) | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,E) | |

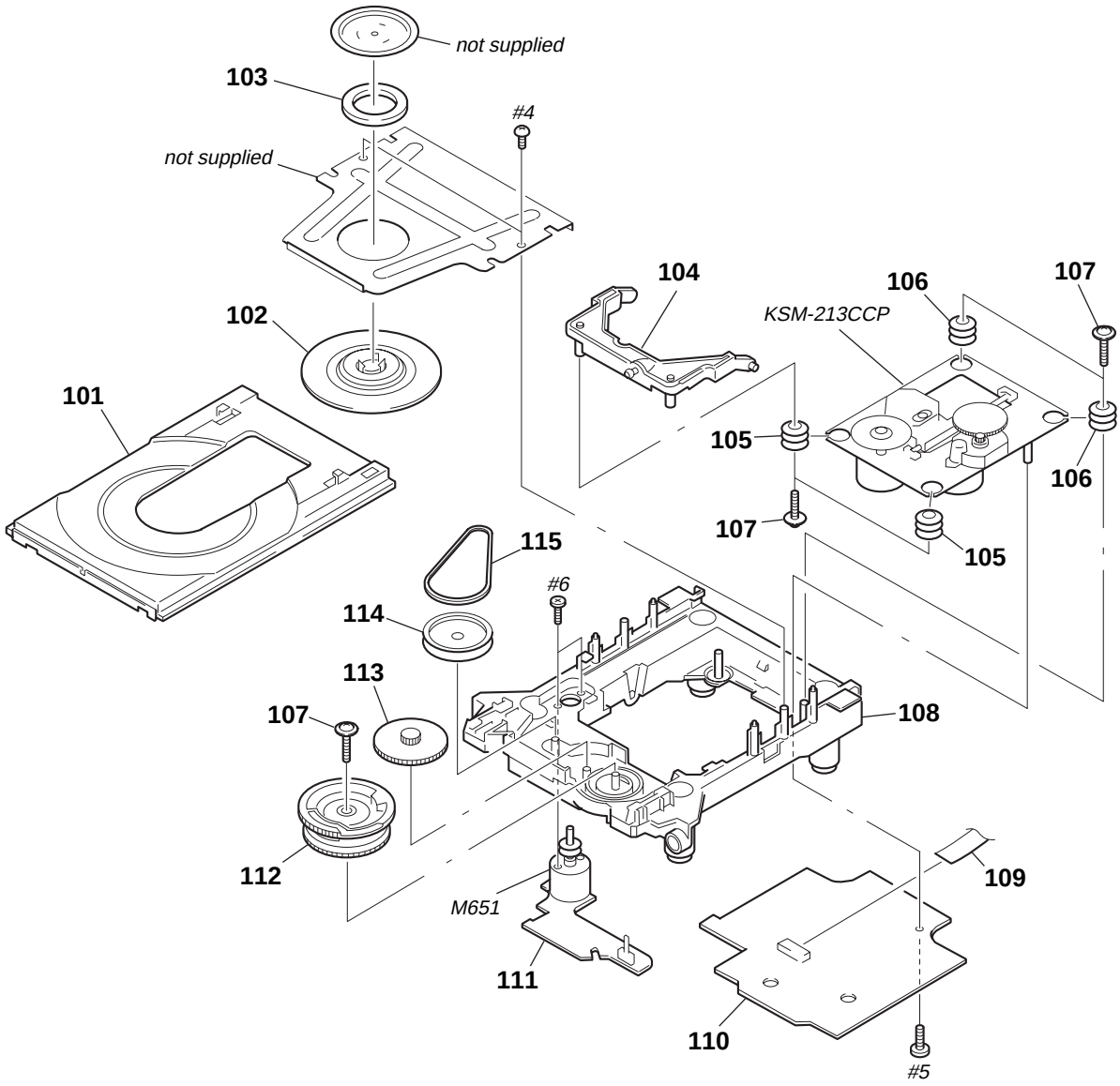
## 6-2. CABINET (UPPER) SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 51 | 3-028-121-01 | CHASSIS (PWB) | |
| 52 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| * 53 | 1-671-180-11 | SW (TOP) BOARD | |
| 54 | 3-028-125-01 | HOLDER (LED) | |
| * 55 | 1-671-176-11 | HEADPHONE BOARD | |
| 56 | 4-951-620-11 | SCREW (2.6X10), +BVTP | |
| 57 | 3-922-112-21 | DAMPER | |
| 58 | X-3376-264-1 | CABINET (TOP) ASSY | |
| 59 | X-3376-101-1 | HOLDER (CASSETTE) ASSY | |
| 60 | 3-028-132-01 | LEVER (REC) | |
| 61 | 3-028-127-01 | SPRING (CASSETTE) | |
| * 62 | 3-028-122-01 | CHASSIS (REC) | |
| * 63 | 3-703-150-11 | CLAMP | |
| * 64 | 1-671-653-11 | RECORD/PLAYBACK SWITCH BOARD | |
| * 65 | A-3321-663-A | MAIN BOARD, COMPLETE (US,E) | |
| * 65 | A-3321-767-A | MAIN BOARD, COMPLETE (SP) | |

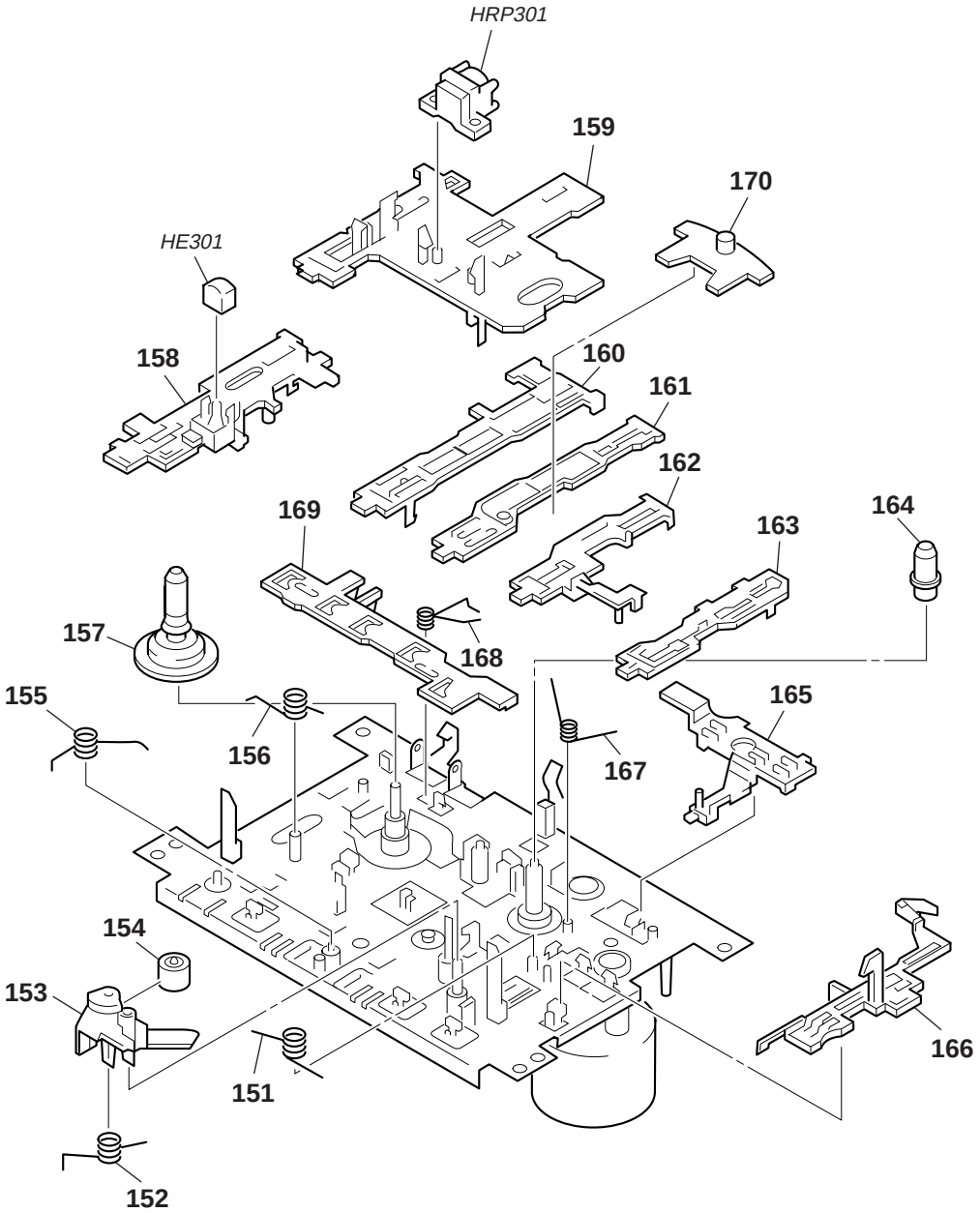
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 66 | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | |
| * 67 | 1-671-045-11 | LAMP BOARD | |
| 68 | 3-028-124-01 | HOLDER (LCD) | |
| 69 | 3-028-133-01 | SHEET, DIFFUSION | |
| * 70 | 3-028-117-01 | CHASSIS (BUTTON) | |
| 71 | X-3376-496-1 | BUTTON (CD) ASSY | |
| 72 | 3-028-115-01 | BUTTON (MD), REC | |
| 73 | 3-028-114-01 | BUTTON (MD), PLAY | |
| 74 | 3-028-113-01 | BUTTON (MD), REW | |
| 75 | 3-028-112-01 | BUTTON (MD), FF | |
| 76 | 3-028-111-01 | BUTTON (MD), EJECT | |
| 77 | 3-028-110-01 | BUTTON (MD), PAUSE | |
| 78 | 3-028-109-01 | LEVER (MD) | |
| 79 | 3-015-646-01 | CUSHION (CD) | |
| LCD501 | 1-803-275-11 | DISPLAY PANEL, LIQUID CRYSTAL | |

## 6-3. CD CHASSIS SECTION



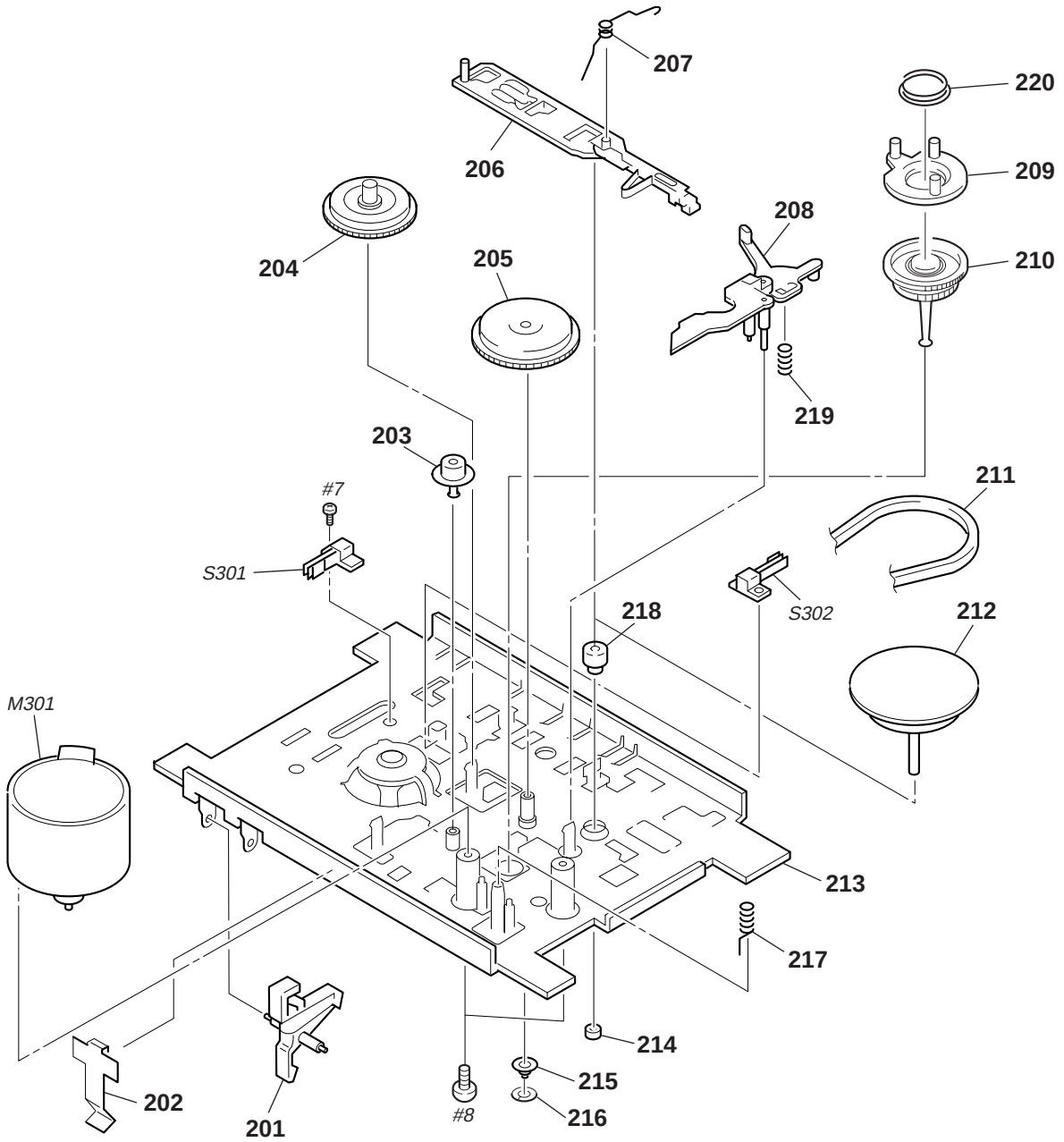

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 3-028-010-01 | TRAY | |
| 102 | 3-028-019-02 | PLATE, CHUCK | |
| 103 | 1-452-899-21 | MAGNET | |
| 104 | 3-028-011-01 | ARM | |
| 105 | 3-910-095-31 | RUBBER, VIBRATION PROOF | |
| 106 | 3-931-379-01 | RUBBER, VIBRATION PROOF | |
| 107 | 3-921-725-01 | SCREW (2.6X10), +PWH | |
| * 108 | 3-028-009-03 | CHASSIS | |
| 109 | 1-783-888-11 | WIRE (FLAT TYPE) (16 CORE) | |
| * 110 | A-3321-664-A | CD BOARD, COMPLETE | |
| * 111 | 1-671-072-11 | LOADING BOARD | |
| 112 | 3-028-013-01 | GEAR, DRIVE | |
| 113 | 3-028-014-01 | GEAR | |
| 114 | 3-028-015-01 | PULLEY | |
| 115 | 3-933-020-01 | BELT | |
| M651 | A-3320-538-A | MOTOR ASSY, LOADING (LOADING) | |

## 6-4. TAPE MECHANISM DECK SECTION-1 (MF-V10-117)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 3-933-010-01 | SPRING (S/P), TORSION | |
| 152 | 3-933-025-01 | SPRING (P), TORSION | |
| 153 | 3-933-026-01 | LEVER (P) | |
| 154 | 3-933-024-01 | ROLLER, PINCH | |
| 155 | 3-933-019-01 | SPRING (F/R), TORSION | |
| 156 | 3-933-028-01 | SPRING (FWD), TORSION | |
| 157 | 3-933-016-01 | GEAR (S REEL) | |
| 158 | 3-008-590-01 | SLIDER (REC) | |
| 159 | 3-008-592-01 | BASE (H), HEAD | |
| * 160 | 3-008-588-01 | SLIDER (REW) | |
| * 161 | 3-008-589-13 | SLIDER (FF) | |
| * 162 | 3-008-587-01 | SLIDER (STOP) | |
| * 163 | 3-008-591-01 | SLIDER (PAUSE) | |
| 164 | 3-933-004-01 | CLAW, REEL | |
| * 165 | 3-933-021-01 | SLIDER (FRP) | |
| * 166 | 3-933-006-01 | SLIDER (EJECT) | |
| 167 | 3-934-833-01 | SPRING (FRP) | |
| 168 | 3-022-794-02 | SPRING (BT) | |
| 169 | 3-933-007-01 | PLATE, LOCK | |
| * 170 | 3-012-114-01 | LEVER (FR) | |
| HE301 | 1-543-876-11 | HEAD (ERASE) | |
| HRP301 | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK) | |

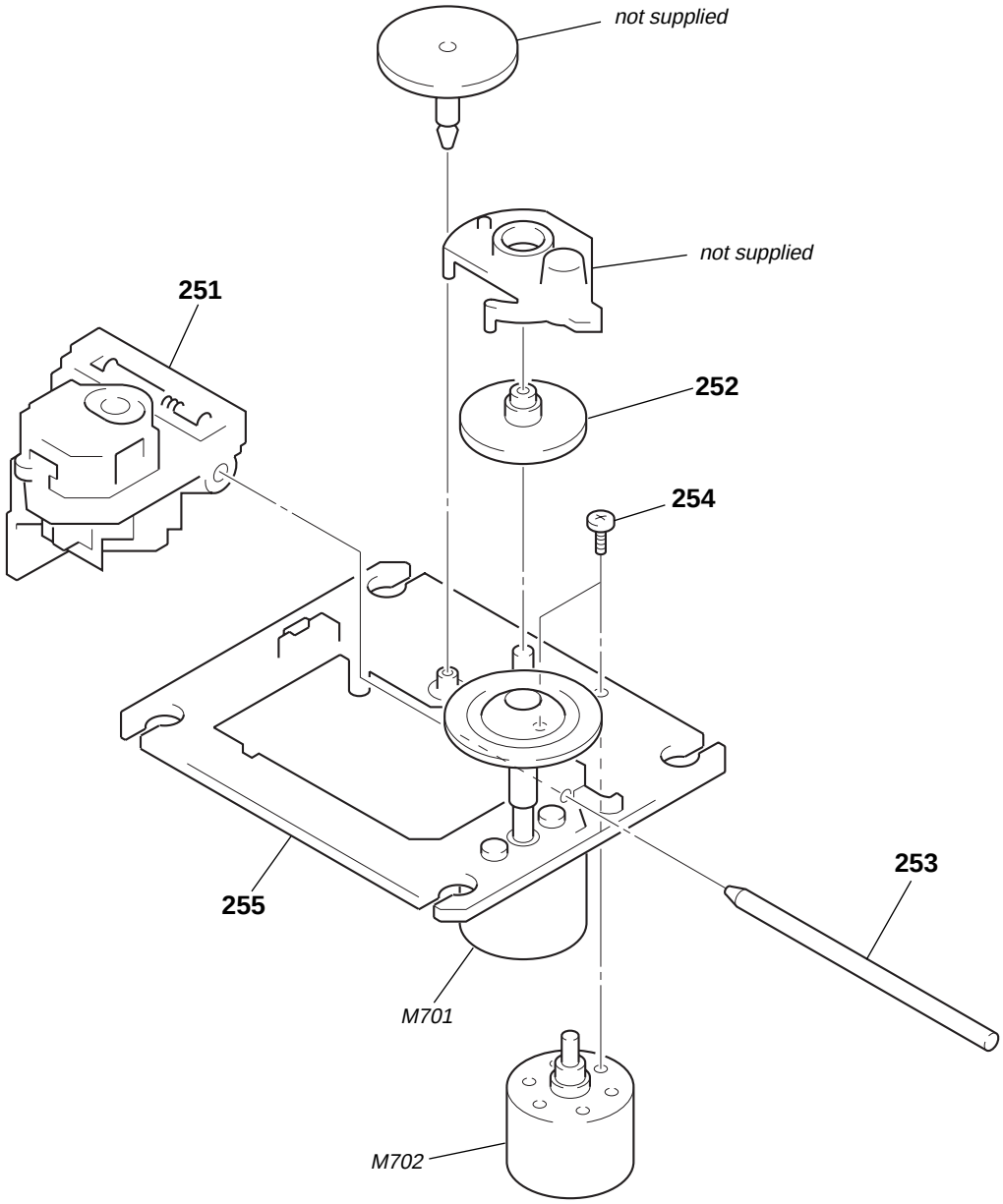
## 6-5. TAPE MECHANISM DECK SECTION-2 (MF-V10-117)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 201 | 3-933-029-01 | LEVER, ERASING PREVENTION | |
| 202 | 3-933-182-01 | SPRING, CASSETTE | |
| 203 | 3-932-995-01 | GEAR (MID) | |
| 204 | X-3371-667-1 | CLUTCH ASSY | |
| 205 | 3-932-997-01 | GEAR (CAM) | |
| * 206 | 3-932-999-01 | SLIDER (SW) | |
| 207 | 3-932-998-01 | SPRING (GROUND), TORSION | |
| 208 | 3-009-648-01 | LEVER (S.OFF) | |
| 209 | 3-936-438-01 | LEVER (K) | |
| 210 | X-3373-572-1 | REEL ASSY (N), T | |
| 211 | 3-933-020-01 | BELT | |
| 212 | X-3372-924-1 | FLYWHEEL ASSY | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 213 | 3-932-993-01 | CHASSIS, OUTSERT | |
| 214 | 3-343-358-01 | RING, RETAINING | |
| 215 | 3-933-005-01 | SPRING (CAM), COMPRESSION | |
| 216 | 3-016-349-01 | WASHER | |
| 217 | 3-937-760-01 | SPRING (GROUND), COMPRESSION | |
| 218 | 3-934-336-01 | BEARING | |
| 219 | 3-939-383-02 | SPRING, COMPRESSION | |
| 220 | 3-009-650-02 | SPRING (K), COMPRESSION | |
| M301 | A-3320-446-A | MOTOR ASSY (CAPSTAN/REEL) | |
| S301 | 1-762-679-11 | SWITCH, LEAF (TAPE PLAY) | |
| S302 | 1-771-059-11 | SWITCH, LEAF (MOTOR ON/OFF) | |

## 6-6. OPTICAL PICK-UP SECTION (KSM-213CCP)




The components identified by mark ⚠ or dotted line with mark. ⚠ are cr itical for saf ety. Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| ⚠251 | 8-848-483-03 | PICK-UP, OPTICAL KSS-213C/C2N | |
| 252 | 2-627-003-02 | GEAR (B) (RP) | |
| 253 | 2-626-908-01 | SHAFT, SLED | |
| 254 | 3-713-786-51 | SCREW +P 2X3 | |
| 255 | X-2646-381-1 | CHASSIS ASSY (MB) (RP), MOTOR (SPINDLE) (INCLUDING M701) | |
| M702 | X-2625-769-1 | GEAR ASSY (MB), MOTOR (SLED) | |

BATT CD

# SECTION 7
# ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the par ts list ma y be diff erent from the par ts specified in the diag rams or the components used on the set.
- -XX and -X mean standardized parts, so the y ma y ha ve some diff erence from the original one.
- RESIST ORS
  All resistors are in ohms.
  METAL:Metal-film resistor .
  METAL OXIDE: Metal o xide-film resistor .
  F:nonflammable
- Items mar ked "*" are not stoc ked since the y are seldom required f or routine ser vice. Some delay should be anticipated when ordering these items.
- SEMICONDUCT ORS
  In each case , u : µ, for e xample:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified b y mark ⚠ or dotted line with mark. ⚠ are cr itical for saf ety. Replace only with part number specified.

When indicating parts by reference number , please include the board.

- Abbre viation
  SP : Singapore model

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-077-11 | BATT BOARD | | | |
| | | ********** | | | |
| | 3-028-154-01 | TERMINAL (-), BATT | | | |
| | 3-028-156-01 | TERMINAL (S) (-), BATT | | | |
| | | < CONNECTOR > | | | |
| * CNP901 | 1-580-155-11 | PIN, CONNECTOR (PC BOARD) 3P | | | |
| ********** | | | | | |
| * | A-3321-664-A | CD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C701 | 1-162-600-11 | CERAMIC | 0.0047uF | 20% | 16V |
| C702 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C703 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C704 | 1-137-374-11 | FILM | 0.047uF | 5% | 50V |
| C705 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C706 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C707 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C708 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C709 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C710 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C711 | 1-162-203-31 | CERAMIC | 15PF | 5% | 50V |
| C712 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C713 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C714 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C715 | 1-126-233-11 | ELECT | 22uF | 20% | 50V |
| C716 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C717 | 1-136-153-00 | FILM | 0.01uF | 5% | 50V |
| C718 | 1-131-375-00 | TANTALUM | 4.7uF | 10% | 10V |
| C719 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C720 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C721 | 1-136-159-00 | FILM | 0.033uF | 5% | 50V |
| C722 | 1-130-489-00 | MYLAR | 0.033uF | 5% | 50V |
| C723 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C724 | 1-130-489-00 | MYLAR | 0.033uF | 5% | 50V |
| C725 | 1-137-440-11 | FILM | 0.018uF | 5% | 50V |
| C726 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C727 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C728 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C729 | 1-126-962-11 | ELECT | 3.3uF | 20% | 50V |
| C730 | 1-137-375-11 | FILM | 0.068uF | 5% | 50V |
| C731 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C732 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C735 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C736 | 1-124-472-11 | ELECT | 470uF | 20% | 10V |
| C737 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C738 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C740 | 1-137-375-11 | FILM | 0.068uF | 5% | 50V |
| C741 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| | | < CONNECTOR > | | | |
| * CNP701 | 1-779-466-11 | CONNECTOR, FFC/FPC 16P | | | |
| CNP702 | 1-770-527-31 | CONNECTOR, FFC/FPC 20P | | | |
| | | < IC > | | | |
| IC701 | 8-752-082-14 | IC CXA1992BR | | | |
| IC702 | 8-759-473-42 | IC BA6898FP | | | |
| | | < TRANSISTOR > | | | |
| Q701 | 8-729-037-13 | TRANSISTOR KTA1271Y | | | |
| | | < RESISTOR > | | | |
| R701 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R702 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R703 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R704 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R705 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R706 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R707 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R709 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R710 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R711 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R712 | 1-247-891-00 | CARBON | 330K | 5% | 1/4W |
| R714 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R715 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R716 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R717 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R718 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R719 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R720 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R721 | 1-247-862-11 | CARBON | 20K | 5% | 1/4W |
| R722 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R723 | 1-247-896-11 | CARBON | 510K | 5% | 1/4W |
| R724 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R725 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R726 | 1-247-876-11 | CARBON | 75K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R727 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R728 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R729 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R731 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R733 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R734 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R736 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R738 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R739 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R740 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R741 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R742 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R743 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R747 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| | | < SWITCH > | | | |
| S701 | 1-762-812-11 | SWITCH, LEAF (LIMIT) | | | |
| ********** | | | | | |
| * | 1-671-176-11 | HEADPHONE BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C158 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C258 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| | | < CONNECTOR > | | | |
| * CNP307 | 1-580-165-11 | PIN, CONNECTOR (PC BOARD) 4P | | | |
| | | < JACK > | | | |
| J301 | 1-779-050-11 | JACK (🎧) | | | |
| | | < CABLE HOLDER > | | | |
| * KH306 | 1-565-386-11 | HOLDER, CABLE 5P | | | |
| | | < COIL > | | | |
| L151 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| L251 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| L351 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| | | < RESISTOR > | | | |
| R157 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R158 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R257 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R258 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| ********** | | | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-045-11 | LAMP BOARD | | | |
| | | ********** | | | |
| | | < CONNECTOR > | | | |
| * CNP308 | 1-580-154-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| | | < PILOT LAMP > | | | |
| PL301 | 1-517-474-31 | LAMP, PILOT (8V/75mA) | | | |
| PL302 | 1-517-474-31 | LAMP, PILOT (8V/75mA) | | | |
| ********** | | | | | |
| * | 1-671-072-11 | LOADING BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C651 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| | | < CONNECTOR > | | | |
| * CN651 | 1-580-167-11 | PIN, CONNECTOR (PC BOARD) 6P | | | |
| | | < IC > | | | |
| IC651 | 8-759-962-08 | IC BA6208 | | | |
| | | < SWITCH > | | | |
| S651 | 1-771-489-11 | SWITCH, LEVER SLIDE (LOADING IN/OUT DET) | | | |
| ********** | | | | | |
| * | A-3321-663-A | MAIN BOARD, COMPLETE (US,E) | | | |
| * | A-3321-767-A | MAIN BOARD, COMPLETE (SP) | | | |
| | | ********** | | | |
| | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | | | |
| | 3-028-124-01 | HOLDER (LCD) | | | |
| | 3-028-133-01 | SHEET, DIFFUSION | | | |
| | 3-831-441-99 | CUSHION, SPEAKER | | | |
| | 4-951-620-01 | SCREW (2.6X8), +BVTP | | | |
| | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C102 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C103 | 1-161-020-11 | CERAMIC | 0.039uF | 10% | 16V |
| C104 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C105 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C107 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C108 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C141 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C142 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C143 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C144 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C145 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C146 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V |
| C147 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |

## MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C150 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C151 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C152 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C153 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C154 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C155 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C156 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C157 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C159 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C201 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C202 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C203 | 1-161-020-11 | CERAMIC | 0.039uF | 10% | 16V |
| C204 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C205 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C207 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C208 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C241 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C242 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C243 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C244 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C245 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C246 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V |
| C247 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C250 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C251 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C252 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C253 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C254 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C255 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C256 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C257 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C259 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C301 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C302 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C303 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C304 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C305 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C306 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C307 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C308 | 1-130-481-00 | MYLAR | 0.0068uF | 5% | 50V |
| C309 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C310 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C331 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C332 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C333 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C334 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C335 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C336 | 1-126-961-11 | ELECT | 2.2uF | 20% | 50V |
| C337 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C338 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C339 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C340 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C341 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C342 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C345 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C350 | 1-104-666-11 | ELECT | 220uF | 20% | 16V |
| C351 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C352 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C353 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C355 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C356 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C358 | 1-124-442-00 | ELECT | 330uF | 20% | 6.3V |
| C359 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C360 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C362 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C363 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C364 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C366 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C367 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C368 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C501 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C502 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C503 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C506 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C507 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C508 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C510 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C512 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C514 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C515 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C516 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C517 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C518 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C519 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C520 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C521 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C522 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C523 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C524 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C525 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C526 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C527 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C529 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C535 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C536 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C537 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C538 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C539 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C540 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C541 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C542 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C543 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C544 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C545 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C546 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C547 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C548 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C549 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C550 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C551 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C552 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C553 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C554 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C555 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C556 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C557 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C558 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C559 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C560 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C561 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C562 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C563 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C564 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C566 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C567 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C568 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C569 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C570 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C573 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C602 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C745 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V (US,E) |
| C746 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C747 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C748 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C749 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C750 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C755 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C756 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C760 | 1-137-194-81 | FILM | 0.47uF | 5% | 50V |
| C761 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C763 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C764 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C765 | 1-162-286-21 | CERAMIC | 220PF | 10% | 50V |
| C766 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C767 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C768 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C769 | 1-136-169-00 | FILM | 0.22uF | 5% | 50V |
| C770 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C771 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C772 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C773 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C774 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C775 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C776 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C780 | 1-162-284-31 | CERAMIC | 150PF | 10% | 50V |
| C781 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C782 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C783 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C790 | 1-162-284-31 | CERAMIC | 150PF | 10% | 50V |
| C791 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C792 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C793 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |

< CONNECTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| CNP301 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP302 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| * CNP303 | 1-580-158-11 | PIN, CONNECTOR (PC BOARD) 6P |
| CNP305 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP306 | 1-506-987-11 | PIN, CONNECTOR (PC BOARD) 5P |
| CNP501 | 1-784-231-12 | SOCKET, CONNECTOR (PC BOARD) 10P |
| * CNP503 | 1-580-161-11 | PIN, CONNECTOR (PC BOARD) 9P |
| CNP704 | 1-691-052-31 | HOUSING, CONNECTOR 20P |

< DIODE >

| Ref. No. | Part No. | Description |
|---|---|---|
| D302 | 8-719-991-33 | DIODE 1SS133T-77 |
| D350 | 8-719-991-33 | DIODE 1SS133T-77 |
| D351 | 8-719-991-33 | DIODE 1SS133T-77 |
| D352 | 8-719-991-33 | DIODE 1SS133T-77 |
| D353 | 8-719-991-33 | DIODE 1SS133T-77 |
| D354 | 8-719-991-33 | DIODE 1SS133T-77 |
| D355 | 8-719-109-97 | DIODE RD6.8ES-B2 |
| D356 | 8-719-109-89 | DIODE RD5.6ESB2 |
| D357 | 8-719-110-09 | DIODE RD8.2ES-B3 |
| D358 | 8-719-991-33 | DIODE 1SS133T-77 |
| D501 | 8-719-991-33 | DIODE 1SS133T-77 |
| D502 | 8-719-991-33 | DIODE 1SS133T-77 |
| D503 | 8-719-991-33 | DIODE 1SS133T-77 |
| D504 | 8-719-991-33 | DIODE 1SS133T-77 |
| D505 | 8-719-991-33 | DIODE 1SS133T-77 |
| D506 | 8-719-991-33 | DIODE 1SS133T-77 |
| D507 | 8-719-991-33 | DIODE 1SS133T-77 |
| D508 | 8-719-991-33 | DIODE 1SS133T-77 |

< FERRITE BEAD >

| Ref. No. | Part No. | Description |
|---|---|---|
| FB701 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,E) |
| FB702 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB704 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB705 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB706 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |

< IC >

| Ref. No. | Part No. | Description |
|---|---|---|
| IC301 | 8-759-264-71 | IC TA2068N |
| IC302 | 8-759-432-41 | IC BH3854AS |
| IC305 | 8-759-426-51 | IC BA5417 |
| IC306 | 8-759-426-51 | IC BA5417 |
| IC501 | 8-752-901-33 | IC CXP83120A-035Q |
| IC502 | 8-759-511-42 | IC S-80730AN |
| IC503 | 8-759-479-70 | IC S-81250SGY-B |
| IC703 | 8-752-384-13 | IC CXD2589Q |

# MAIN

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| | | < CABLE HOLDER > | | | | |
| * KH308 | 1-573-287-11 | HOLDER, CABLE 2P | | | | |
| | | < COIL > | | | | |
| L501 | 1-412-832-11 | INDUCTOR | 1uH | | | |
| L502 | 1-412-832-11 | INDUCTOR | 1uH | | | |
| L503 | 1-410-509-11 | INDUCTOR | 10uH | | | |
| | | < LIQUID CRYSTAL DISPLAY > | | | | |
| LCD501 | 1-803-275-11 | DISPLAY PANEL, LIQUID CRYSTAL | | | | |
| | | < TRANSISTOR > | | | | |
| Q301 | 8-729-281-53 | TRANSISTOR | 2SC1815-GR | | | |
| Q302 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q303 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q304 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q341 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q342 | 8-729-036-80 | TRANSISTOR | KRC110M | | | |
| Q351 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q352 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q353 | 8-729-021-82 | TRANSISTOR | 2SD2396K | | | |
| Q354 | 8-729-036-86 | TRANSISTOR | KTC3203Y-AT | | | |
| Q355 | 8-729-209-15 | TRANSISTOR | 2SD2012 | | | |
| Q356 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q357 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q358 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q359 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q360 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q368 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q369 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q501 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q502 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q503 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q504 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q505 | 8-729-036-80 | TRANSISTOR | KRC110M | | | |
| Q506 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q507 | 8-729-922-66 | TRANSISTOR | 2SC2410SN | | | |
| Q508 | 8-729-922-66 | TRANSISTOR | 2SC2410SN | | | |
| Q509 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| | | < RESISTOR > | | | | |
| R101 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R102 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W | |
| R103 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R104 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W | |
| R105 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R106 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R107 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R110 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R140 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R141 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R150 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R151 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R152 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R153 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R154 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| ⚠R155 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| ⚠R156 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| R159 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R160 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R201 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R202 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W | |
| R203 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R204 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W | |
| R205 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R206 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R207 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R210 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R240 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R241 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R250 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R251 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R252 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R253 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R254 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| ⚠R255 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| ⚠R256 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| R259 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R260 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R301 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R302 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R303 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R304 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R305 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | |
| R307 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R311 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R312 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R313 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R340 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | |
| R342 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R343 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R344 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R345 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R349 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R350 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R351 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R352 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R353 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R354 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R355 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R356 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R357 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R358 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R359 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |

The components identified by mark ⚠ or dotted line with mark. ⚠ are cr itical for saf ety. Replace only with part number specified.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R360 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R361 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R362 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R363 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R501 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R502 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R503 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R504 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R505 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R506 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R507 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R508 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R509 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R510 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R511 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R512 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R513 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R514 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R515 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R516 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R517 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R518 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R519 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R520 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R521 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R522 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R523 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R524 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R525 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R526 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R527 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R528 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R529 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R530 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R531 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R532 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R533 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R534 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R535 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R536 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R537 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R538 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R539 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R540 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R541 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R542 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R543 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R544 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R545 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R546 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R547 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R548 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R549 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R550 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R551 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R552 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R553 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R554 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R555 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R556 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R557 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R558 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R559 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R560 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R561 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R562 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R563 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R564 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R565 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R566 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R567 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R568 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R569 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R570 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R571 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R572 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R573 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R574 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R575 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R576 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R577 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| ⚠R578 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W F |
| R579 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R580 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R582 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R583 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W (US,E) |
| R583 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W (SP) |
| R584 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R586 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R587 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R588 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R589 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R590 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R591 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R592 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R593 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R594 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R595 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R596 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R598 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R599 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R600 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R629 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R630 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |

The components identified by mark ⚠or dotted line with mark. ⚠are cr itical for saf ety. Replace only with part number specified.

## MAIN POWER

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R631 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R713 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R730 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R732 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R748 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R749 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R750 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R751 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R752 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R753 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R754 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R755 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R756 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R757 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R758 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R759 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R764 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R765 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R770 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R771 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R772 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R773 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R774 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R775 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R776 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R780 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R781 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R782 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R783 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R790 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R791 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R792 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R793 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| | | < TRANSFORMER > | | | |
| T301 | 1-433-268-00 | TRANSFORMER, BIAS OSCILLATOR | | | |
| | | < VIBRATOR > | | | |
| X501 | 1-767-184-11 | VIBRATOR, CERAMIC (4.19MHz) | | | |
| X502 | 1-767-697-11 | VIBRATOR, CRYSTAL (32.768kHz) | | | |
| X701 | 1-577-253-11 | VIBRATOR, CERAMIC (16.9344MHz) | | | |
| ********** | | | | | |
| * | 1-671-179-11 | POWER BOARD | | | |
| | | ********** | | | |
| | 1-533-233-31 | HOLDER, FUSE | | | |
| | | < CAPACITOR > | | | |
| C901 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C902 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C903 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C904 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C906 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C907 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C908 | 1-126-768-11 | ELECT | 2200uF | 20% | 16V |
| C909 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| | | < AC INLET > | | | |
| ⚠CNJ901 | 1-526-818-11 | INLET, AC (~AC IN) (E) | | | |
| ⚠CNJ901 | 1-526-838-11 | INLET, AC 2P (~AC IN) (SP) | | | |
| ⚠CNJ901 | 1-540-009-11 | INLET, AC (~AC IN) (US) | | | |
| | | < DIODE > | | | |
| D901 | 8-719-031-53 | DIODE LT2A02 | | | |
| D902 | 8-719-031-53 | DIODE LT2A02 | | | |
| D903 | 8-719-031-53 | DIODE LT2A02 | | | |
| D904 | 8-719-031-53 | DIODE LT2A02 | | | |
| D905 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D906 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D907 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D908 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D909 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| | | < FUSE > | | | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15A/250V) (SP) | | | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) (US,E) | | | |
| | | < FERRITE BEAD > | | | |
| FB901 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,E) | | | |
| FB902 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,E) | | | |
| | | < IC > | | | |
| IC901 | 8-759-479-70 | IC S-81250SGY-B | | | |
| | | < CABLE HOLDER > | | | |
| * KH901 | 1-565-384-11 | HOLDER, CABLE 3P | | | |
| * KH902 | 1-565-385-11 | HOLDER, CABLE 4P | | | |
| | | < LINE FILTER > | | | |
| ⚠LF901 | 1-402-663-11 | TRANSFORMER, LINE FILTER (LFT) | | | |
| | | < RESISTOR > | | | |
| R900 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R901 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R903 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R904 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| | | < TRANSFORMER > | | | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | | | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,E) | | | |
| ********** | | | | | |

The components identified by mark ⚠ or dotted line with mark. ⚠ are cr itical for saf ety. Replace only with part number specified.

# RECORD/PLAYBACK SWITCH | SW (L) | SW (R) | SW (TOP)

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-653-11 | RECORD/PLAYBACK SWITCH BOARD | | | |
| | | ********** | | | |
| | | < CABLE HOLDER > | | | |
| * KH305 | 1-565-385-11 | HOLDER, CABLE 4P | | | |
| | | < SWITCH > | | | |
| S301 | 1-762-565-11 | SWITCH, SLIDE (REC/PB) | | | |
| ********** | | | | | |
| * | 1-671-182-11 | SW (L) BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C601 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C603 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| | | < CONNECTOR > | | | |
| CNJ601 | 1-784-230-11 | PLUG, CONNECTOR (PC BOARD) 10P | | | |
| | | < DIODE > | | | |
| D605 | 8-719-038-29 | LED SLP-181B-51 (OPR/BATT) | | | |
| | | < IC > | | | |
| IC601 | 8-759-459-85 | IC NJL63H400A | | | |
| | | < CABLE HOLDER > | | | |
| * KH601 | 1-573-287-11 | HOLDER, CABLE 2P | | | |
| | | < RESISTOR > | | | |
| R601 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R626 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R627 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W |
| | | < SWITCH > | | | |
| S601 | 1-762-798-11 | SWITCH, KEY BOARD (OPERATE) | | | |
| S602 | 1-762-798-11 | SWITCH, KEY BOARD (SLEEP) | | | |
| S616 | 1-762-798-11 | SWITCH, KEY BOARD (STANDBY) | | | |
| ********** | | | | | |
| * | 1-671-181-11 | SW (R) BOARD | | | |
| | | ********** | | | |
| | | < CABLE HOLDER > | | | |
| * KH602 | 1-573-287-11 | HOLDER, CABLE 2P | | | |
| | | < RESISTOR > | | | |
| R620 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R621 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R622 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < SWITCH > | | | |
| S623 | 1-762-798-11 | SWITCH, KEY BOARD (⏏ CD OPEN/CLOSE) | | | |
| S624 | 1-762-798-11 | SWITCH, KEY BOARD (TIMER) | | | |
| S625 | 1-762-798-11 | SWITCH, KEY BOARD (CLOCK) | | | |
| S626 | 1-762-798-11 | SWITCH, KEY BOARD (DISPLAY ENTER MEM) | | | |
| ********** | | | | | |
| * | 1-671-180-11 | SW (TOP) BOARD | | | |
| | | ********** | | | |
| | 3-028-125-01 | HOLDER (LED) | | | |
| | | < DIODE > | | | |
| D601 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE ROCK) | | | |
| D602 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE POP) | | | |
| D603 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE LIVE) | | | |
| D604 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE VOCAL) | | | |
| | | < RESISTOR > | | | |
| R602 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R603 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R604 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R605 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R606 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R607 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R608 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R609 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R610 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R611 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R612 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R613 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R614 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R615 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R616 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R617 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R618 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R619 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R625 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| | | < SWITCH > | | | |
| S603 | 1-762-798-11 | SWITCH, KEY BOARD (MONO/ST ISS PLAY MODE) | | | |
| S604 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE OFF) | | | |
| S605 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE ROCK) | | | |
| S606 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE POP) | | | |
| S607 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE LIVE) | | | |

## SW (TOP) TUNER

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| S608 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE VOCAL) | |
| S609 | 1-762-798-11 | SWITCH, KEY BOARD (► II) | |
| S610 | 1-762-798-11 | SWITCH, KEY BOARD (■) | |
| S611 | 1-762-798-11 | SWITCH, KEY BOARD (►►I/TUNE +) | |
| S612 | 1-762-798-11 | SWITCH, KEY BOARD (I◄◄/TUNE -) | |
| S613 | 1-762-798-11 | SWITCH, KEY BOARD (MEGA BASS) | |
| S614 | 1-762-798-11 | SWITCH, KEY BOARD (VOL +) | |
| S615 | 1-762-798-11 | SWITCH, KEY BOARD (VOL -) | |
| S617 | 1-762-798-11 | SWITCH, KEY BOARD (BAND) | |
| S618 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET +) | |
| S619 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET -) | |
| S620 | 1-762-798-11 | SWITCH, KEY BOARD (FUNCTION) | |
| S621 | 1-762-798-11 | SWITCH, KEY BOARD (LOOP) | |
| S622 | 1-762-798-11 | SWITCH, KEY BOARD (FLASH) | |
| ********** | | | |
| * | A-3321-667-A | TUNER BOARD, COMPLETE (US,E) | |
| * | A-3321-920-A | TUNER BOARD, COMPLETE (SP) | |
| | | ********** | |
| | | < CAPACITOR > | |
| C3 | 1-162-301-11 | CERAMIC 0.0015uF 30% 16V | |
| C10 | 1-124-903-11 | ELECT 1uF 20% 50V | |
| C11 | 1-164-159-21 | CERAMIC 0.1uF 50V | |
| C12 | 1-126-963-11 | ELECT 4.7uF 20% 50V | |
| C13 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C14 | 1-161-053-00 | CERAMIC 0.015uF 10% 50V (SP) | |
| C14 | 1-162-843-11 | CERAMIC 0.022uF 10% 16V (US,E) | |
| C15 | 1-161-053-00 | CERAMIC 0.015uF 10% 50V (SP) | |
| C15 | 1-162-843-11 | CERAMIC 0.022uF 10% 16V (US,E) | |
| C16 | 1-124-903-11 | ELECT 1uF 20% 50V | |
| C17 | 1-124-903-11 | ELECT 1uF 20% 50V | |
| C18 | 1-104-666-11 | ELECT 220uF 20% 10V | |
| C20 | 1-164-159-21 | CERAMIC 0.1uF 50V | |
| C21 | 1-124-903-11 | ELECT 1uF 20% 50V | |
| C22 | 1-164-159-21 | CERAMIC 0.1uF 50V | |
| C23 | 1-124-903-11 | ELECT 1uF 20% 50V | |
| C24 | 1-162-288-31 | CERAMIC 330PF 10% 50V | |
| C25 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C26 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C27 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C30 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C31 | 1-102-514-11 | CERAMIC 22PF 5% 50V | |
| C32 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C33 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C34 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C35 | 1-164-159-21 | CERAMIC 0.1uF 50V | |
| C40 | 1-164-159-21 | CERAMIC 0.1uF 50V | |
| C41 | 1-102-820-00 | CERAMIC 330PF 5% 50V | |
| C42 | 1-162-198-31 | CERAMIC 8.2PF 10% 50V | |
| C43 | 1-162-282-31 | CERAMIC 100PF 10% 50V | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| C44 | 1-162-839-11 | CERAMIC 0.01uF 10% 16V | |
| C45 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C60 | 1-102-518-11 | CERAMIC 33PF 5% 50V | |
| C61 | 1-162-203-31 | CERAMIC 15PF 5% 50V | |
| C62 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C64 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C65 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C68 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C69 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C70 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C71 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C72 | 1-124-907-11 | ELECT 10uF 20% 50V | |
| C75 | 1-136-177-00 | FILM 1uF 5% 50V | |
| C77 | 1-130-483-00 | MYLAR 0.01uF 5% 50V | |
| C80 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C90 | 1-162-282-31 | CERAMIC 100PF 10% 50V | |
| C91 | 1-162-294-31 | CERAMIC 0.001uF 10% 50V | |
| C92 | 1-162-282-31 | CERAMIC 100PF 10% 50V | |
| C93 | 1-162-306-11 | CERAMIC 0.01uF 20% 16V | |
| C94 | 1-162-282-31 | CERAMIC 100PF 10% 50V | |
| | | < FILTER > | |
| CF2 | 1-760-738-61 | FILTER, CERAMIC | |
| CF3 | 1-781-171-11 | DISCRIMINATOR, CERAMIC | |
| | | < ENCAPSULATED COMPONENT > | |
| CFT1 | 1-233-885-11 | ENCAPSULATED COMPONENT | |
| | | < FUSE HOLDER > | |
| CN4 | 1-533-233-31 | HOLDER, FUSE | |
| | | < CONNECTOR > | |
| * CNP1 | 1-774-959-11 | PIN, CONNECTOR (PC BOARD) 13P | |
| | | < TRIMMER > | |
| CT1 | 1-141-603-11 | CAP, ADJ 20PF | |
| CT3 | 1-141-601-11 | CAP, ADJ 10PF | |
| | | < DIODE > | |
| D1 | 8-719-050-72 | DIODE KV1370NT | |
| D2 | 8-719-050-72 | DIODE KV1370NT | |
| D3 | 8-719-050-69 | DIODE KV1520N | |
| D10 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D11 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D13 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D14 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D15 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D16 | 8-719-991-33 | DIODE 1SS133T-77 | |
| | | < BAND PASS FILTER > | |
| FL1 | 1-236-711-21 | FILTER, BAND PASS | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC1 | 8-759-549-84 | IC TA2104AN | | | |
| IC2 | 8-759-549-77 | IC BH2615S | | | |
| | | < COIL > | | | |
| L1 | 1-409-905-31 | COIL, FM RF | | | |
| L2 | 1-409-904-31 | COIL, FM OSC | | | |
| L3 | 1-501-923-21 | ANTENNA, FERRITE-ROD (AM) | | | |
| L4 | 1-411-234-41 | COIL, AM OSC | | | |
| L40 | 1-410-509-11 | INDUCTOR | 10uH | | |
| L90 | 1-414-142-11 | INDUCTOR | 1uH | | |
| | | < TRANSISTOR > | | | |
| Q10 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q11 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q12 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q13 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q60 | 8-729-012-83 | FET 2SK679A | | | |
| Q61 | 8-729-106-07 | FET 2SK514-HR | | | |
| Q80 | 8-729-037-24 | TRANSISTOR KRA111M-AT | | | |
| | | < RESISTOR > | | | |
| R1 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R7 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R10 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R11 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R12 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R13 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R14 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R30 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R31 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R32 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R33 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R40 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R41 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R60 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R61 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R62 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R63 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R64 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R65 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R66 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R71 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R72 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R73 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R74 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R75 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R76 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R80 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R91 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < VIBRATOR > | |
| X1 | 1-760-130-11 | VIBRATOR, CRYSTAL (75kHz) | |
| ********** | | | |
| | | MISCELLANEOUS | |
| | | ********** | |
| 66 | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | |
| 103 | 1-452-899-21 | MAGNET | |
| 109 | 1-783-888-11 | WIRE (FLAT TYPE) (16 CORE) | |
| ⚠251 | 8-848-483-03 | PICK-UP, OPTICAL KSS-213C/C2N | |
| 255 | X-2646-381-1 | CHASSIS ASSY (MB) (RP), MOTOR (SPINDLE) (INCLUDING M701) | |
| ANT1 | 1-501-480-11 | ANTENNA, TELESCOPIC | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15AL/250V) (SP) | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) (US,E) | |
| HE301 | 1-543-876-11 | HEAD (ERASE) | |
| HRP301 | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK) | |
| M301 | A-3320-446-A | MOTOR ASSY (CAPSTAN/REEL) | |
| M651 | A-3320-538-A | MOTOR ASSY, LOADING (LOADING) | |
| M702 | X-2625-769-1 | GEAR ASSY (MB), MOTOR (SLED) | |
| S301 | 1-762-679-11 | SWITCH, LEAF (TAPE PLAY) | |
| S302 | 1-771-059-11 | SWITCH, LEAF (MOTOR ON/OFF) | |
| SP301 | 1-529-131-11 | SPEAKER (8cm) (L-CH) | |
| SP302 | 1-529-131-11 | SPEAKER (8cm) (R-CH) | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,E) | |
| ********** | | | |
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ********** | |
| ⚠ | 1-557-287-11 | CORD, POWER (E) | |
| ⚠ | 1-769-412-13 | CORD, POWER (SP) | |
| ⚠ | 1-783-878-11 | CORD, POWER (US) | |
| | 3-027-153-01 | LID, BATTERY CASE (for RMT-CS47A) | |
| | 3-864-534-11 | MANUAL, INSTRUCTION (ENGLISH,SPANISH) (SP) | |
| | 3-864-534-21 | MANUAL, INSTRUCTION (ENGLISH,GERMAN) (SP) | |
| | 3-864-534-51 | MANUAL, INSTRUCTION (ENGLISH) (US,E) | |
| | 3-864-534-71 | MANUAL, INSTRUCTION (SPANISH) (E) | |
| | A-3250-870-A | RMT-CS47A//C (SET) | |
| ********** | | | |

The components identified by mark ⚠or dotted line with mark. ⚠are cr itical for saf ety. Replace only with part number specified.

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ********** | |
| | | HARDWARE LIST | |
| | | ********** | |
| #1 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S | |
| #2 | 7-685-649-79 | SCREW +BTP 3X14 TYPE2 N-S | |
| #3 | 7-682-548-04 | SCREW +B 3X8 | |
| #4 | 7-685-134-19 | SCREW +P 2.6X8 TYPE2 NON-SLIT | |
| #5 | 7-621-255-45 | SCREW +P 2X6 | |
| #6 | 7-621-772-00 | SCREW +B 2X3 | |
| #7 | 7-685-783-09 | SCREW +PTT 2X6 (S) | |
| #8 | 7-621-770-87 | SCREW +B 2.6X5 | |
| #9 | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S | |
| #10 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |



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**(Shibaura)**

# CFD-S47

# SERVICE MANUAL

**Ver 1.1 1999. 02**

*US Model*
*Canadian Model*
*E Model*

| | | |
|---|---|---|
| CD Section | Model Name Using Similar Mechanism | NEW |
| | CD Loading Mechanism Type | FLM-S47-149 |
| | CD Mechanism Type | KSM-213CCP |
| | Optical Pick-up Name | KSS-213C |
| TC Section | Model Name Using Similar Mechanism | CFD-V10 |
| | Tape Transport Mechanism Type | MF-V10-117 |

## SPECIFICATIONS

**AUDIO POWER SPECIFICATIONS (US Model)**
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 6-ohm loads, both channels driven from 100 - 10,000 Hz: rated 3.5 W per channel-minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

**CD player section**
System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wave length: 780 nm
Emission duration: Continuous
Laser output: Less than 44.6 µW
(This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Spindle speed
200 r/min (rpm) to 500 r/min (rpm) (CLV)
Number of channels
2
Frequency response
20 - 20,000 Hz +1/–2 dB
Wow and flutter
Below measurable limit

**Radio section**
Frequency range

| | | |
|---|---|---|
| FM | US, Canadian, E model | 87.6 - 108 MHz |
| | Singapore model | 87.6 - 107 MHz |
| AM | US, Canadian, E model | 530 - 1,710 kHz |
| | Singapore model | 531 - 1,602 kHz |

IF
FM: 10.7 MHz
AM: 450 kHz
Aerials
FM: Telescopic aerial
AM: Built-in ferrite bar aerial

**Cassette-corder section**
Recording system
4-track 2 channel stereo
Fast winding time
Approx. 150 sec. with Sony cassette C-60
Frequency response
TYPE I (normal): 80 - 10,000 Hz

– Continued on next page –

## CD RADIO CASSETTE-CORDER

MICROFILM

SONY®

**General**

Speaker
- Full range: 8 cm (3 1/4 in.) dia., 6 ohms, cone type (2)

Outputs
- Headphones jack (stereo minijack)
- For 16 - 68 ohms impedance headphones

Maximum power output
- 3.5 W + 3.5 W (US, Canadian, E model)
- 4.5 W + 4.5 W (Singapore model)

Power requirements
- For CD radio cassette-corder:
- 120 V AC, 60 Hz (US, Canadian, E model)
- 230 V AC, 50 Hz (Singapore model)
- 9 V DC, 6 R20 (size D) batteries
- For memory back-up:
- 6 V DC, 4 R6 (size AA) batteries
- For remote control:
- 3 V DC, 2 R6 (size AA) batteries

Power consumption
- AC 25 W

Battery life
- For CD radio cassette-corder:

| **FM recording** |
|---|
| Sony R20P: approx. 3.5 h |
| Sony alkaline LR20: approx. 10 h |
| **Tape playback** |
| Sony R20P: approx. 1.5 h |
| Sony alkaline LR20: approx. 5 h |
| **CD playback** |
| Sony R20P: approx. 1 h |
| Sony alkaline LR20: approx. 4 h |

Dimensions
- Approx. 420 × 177 × 281 mm (w/h/d) (16 5/8 × 7 × 11 1/8 inches) (incl. projecting parts)

Mass
- Approx. 5.1 kg (11 lb. 4 oz.) (incl. batteries)

Supplied accessories
- AC power cord (1)
- Remote control RMT-CS47A (1)

Design and specifications are subject to change without notice.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

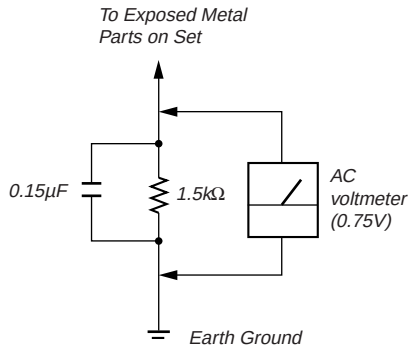


***Fig. A. Using an AC voltmeter to check AC leakage.***

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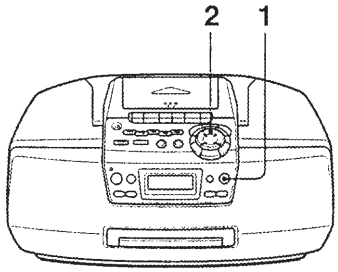
# SECTION 1
# GENERAL

This section is extracted from instruction manual.



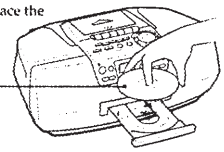
## Playing a CD




Connect the supplied AC power cord (see page 25).

**1**

Press ≜ CD OPEN/CLOSE (direct power-on) and place the CD on the CD tray.

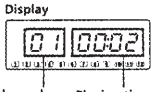



**2**

Press ►II.

The CD tray closes and the player plays all the tracks once.

Display



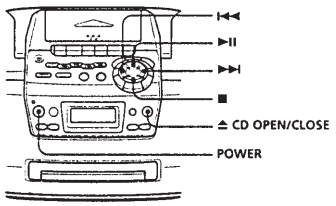

Track number Playing time



**Tip**

Next time you want to listen to a CD, just press ►II. The player turns on automatically and starts playing the CD.

**Use these buttons for additional operations**

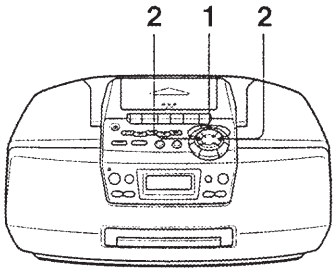



| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| stop playback | ■ |
| pause playback | ►II (II on the remote) Press the button again to resume play after pause. |
| go to the next track | ⏭ |
| go back to the previous track | ⏮ |
| remove the CD | ≜ CD OPEN/CLOSE |
| turn on/off the player | POWER |





## Listening to the radio

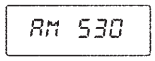



Connect the supplied AC power cord (see page 25).

**1**

Press BAND until the band you want appears in the display (direct power-on).

Display



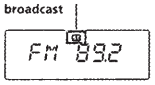

**2**

Hold down TUNE +/►►I or TUNE –/I◄◄ (TUNE + or – on the remote) until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you can't tune in a station, press the button repeatedly to change the frequency step by step.

Indicates an FM stereo broadcast

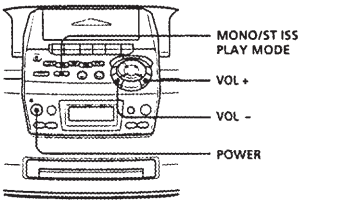





**Tips**

- If the FM broadcast is noisy, press MONO/ST ISS•PLAY MODE until "Mono" appears in the display and the radio will play in monaural.
- Next time you want to listen to the radio, just press BAND. The player turns on automatically and starts playing the previous station.

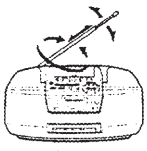
**Use these buttons for additional operations**



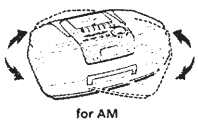

| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| turn on/off the radio | POWER |

**To improve broadcast reception**

Reorient the antenna for FM. Reorient the player itself for AM.

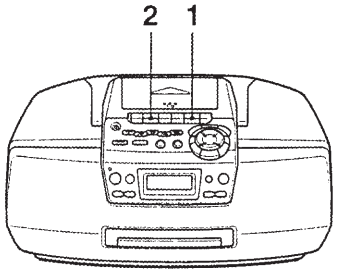


for FM



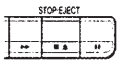
for AM

## Playing a tape



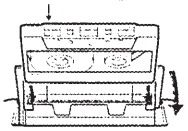

Connect the supplied AC power cord (see page 25).

**1**

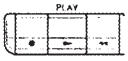



Press ■⏏ to open the tape compartment and insert a recorded tape. Use TYPE I (normal) tape only. Close the compartment.

With the side you want to play facing upward



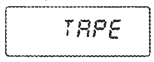
**2**




Press ►.

The player turns on (direct power-on) and starts playing.

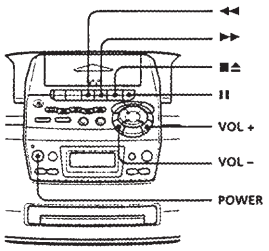
Display




**Tip**

Next time you want to listen to a tape, just press ►. The player turns on automatically and starts playing the tape.

**Use these buttons for additional operations**



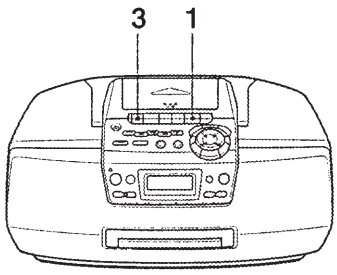

| To | Press |
|---|---|
| adjust the volume | VOL +, – |
| stop playback | ■⏏ |
| fast-forward or rewind the tape | ►► or ◄◄ |
| pause playback | II<br>Press the button again to resume play after pause. |
| eject the cassette | ■⏏ |
| turn on/off the player | POWER |





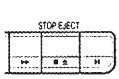


## Recording on a tape



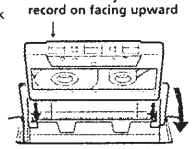

Connect the supplied AC power cord (see page 25).

**1**




Press ■⏏ to open the tape compartment and insert a blank tape. Use TYPE I (normal) tape only.

With the side you want to record on facing upward



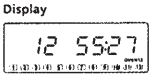
**2**

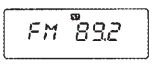
Select the program source you want to record.

To record from the CD player, insert a CD (see page 4) and press ■ on the CD section.

To record from the radio, tune in the station you want (see page 6).

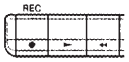
Display






**3**

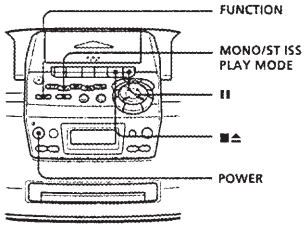



Press ● to start recording (► is depressed automatically).

**Tips**

- Adjusting the volume or the audio emphasis (see page 27) will not affect the recording level.
- If the AM program makes a whistling sound after you've pressed ● in step 3, press MONO/ST ISS•PLAY MODE (Interference Suppress switch) repeatedly until the noise is at a minimum.
- For the best results, use the AC power as a power source.
- To erase a recording, proceed as follows:
  1 Insert the tape whose recording you want to erase.
  2 Press FUNCTION to select "TAPE".
  3 Press ●.

**Use these buttons for additional operations**




| To | Press |
|---|---|
| stop recording | ■⏏ |
| pause recording | II<br>Press the button again to resume recording. |
| turn on/off the player | POWER |

# SECTION 2
# DISASSEMBLY

• The equipment can be removed using the following procedure.

Set ➡ Cabinet (front) assy ➡ Cabinet (upper) assy ➡ CD mechanism block ➡ SW (L) board, SW (R) board

Cabinet (upper) assy ➡ Tuner board

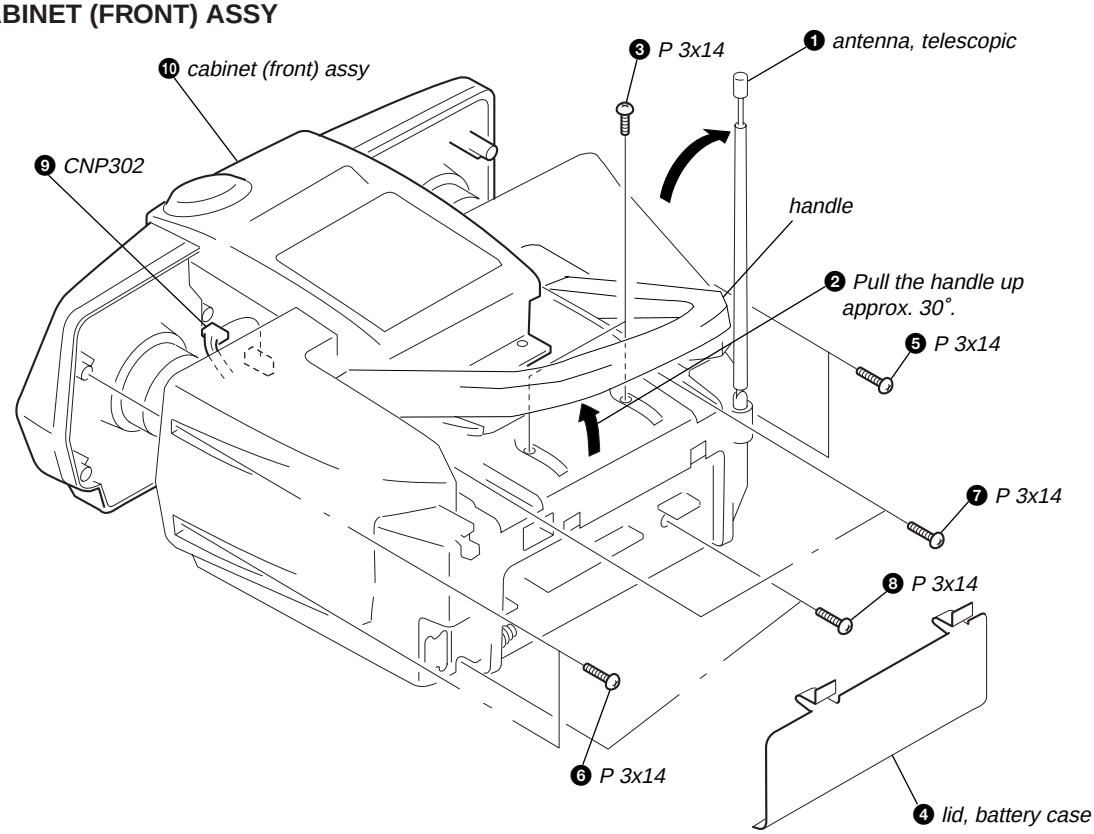
Cabinet (upper) assy ➡ Power board

CD mechanism block ➡ Plate assy, chuck ➡ Tray ➡ Loading board ➡ CD board ➡ CD mechanism block

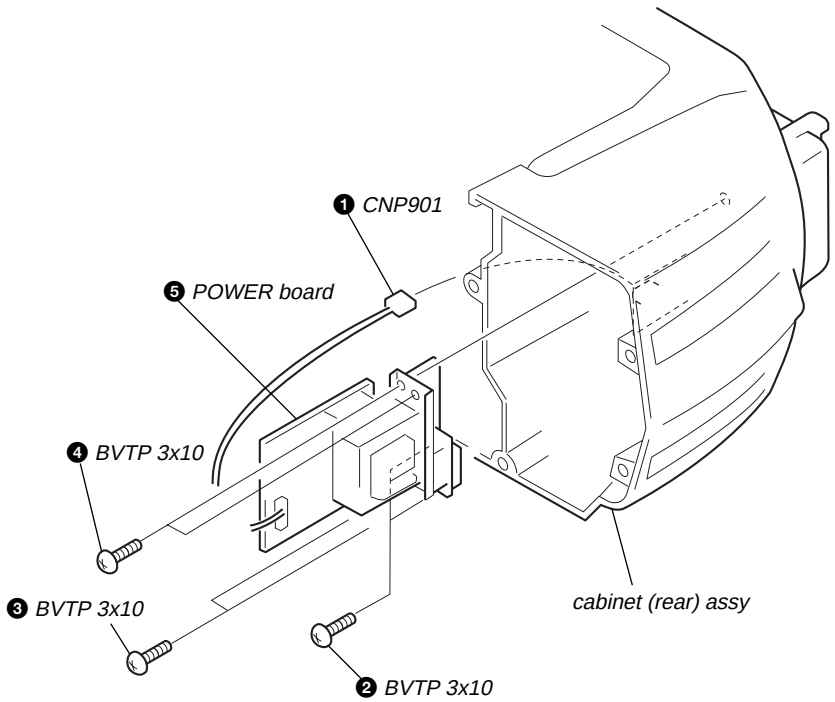
CD mechanism block ➡ Main board ➡ SW (TOP) board, Record/Playback switch board, Headphone board ➡ Cassette mechanism block

**Note :** Follow the disassembly procedure in the numerical order given.

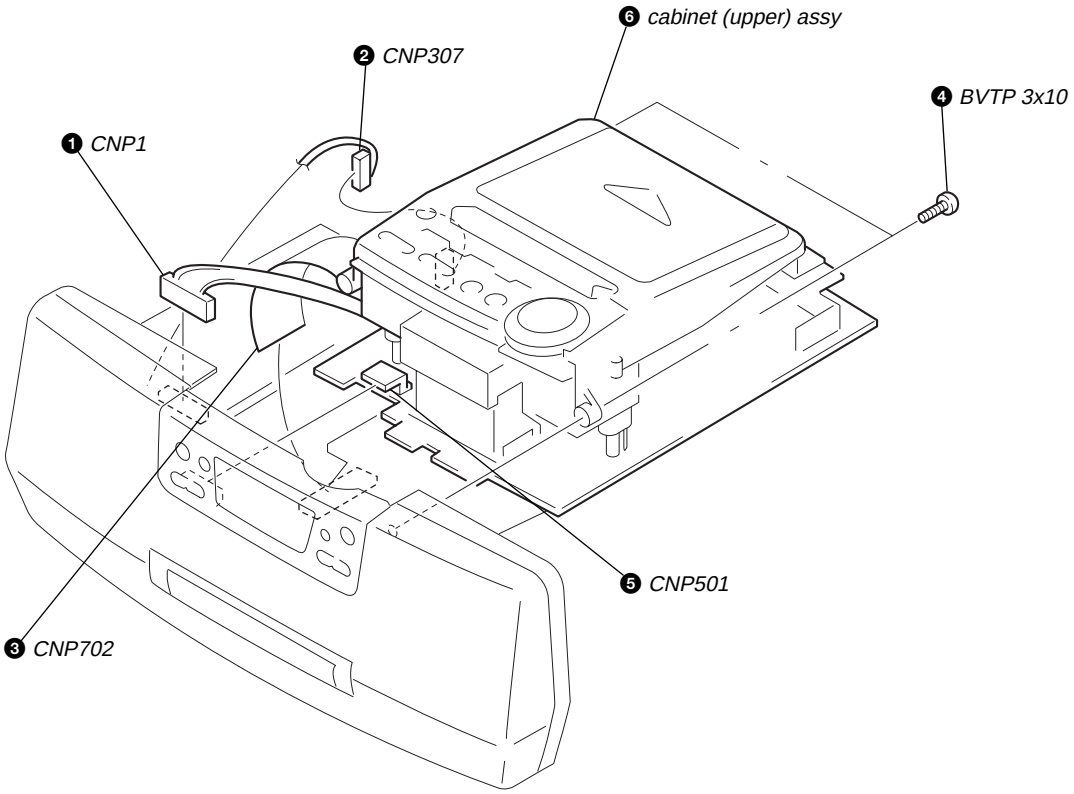
## 2-1. CABINET (FRONT) ASSY



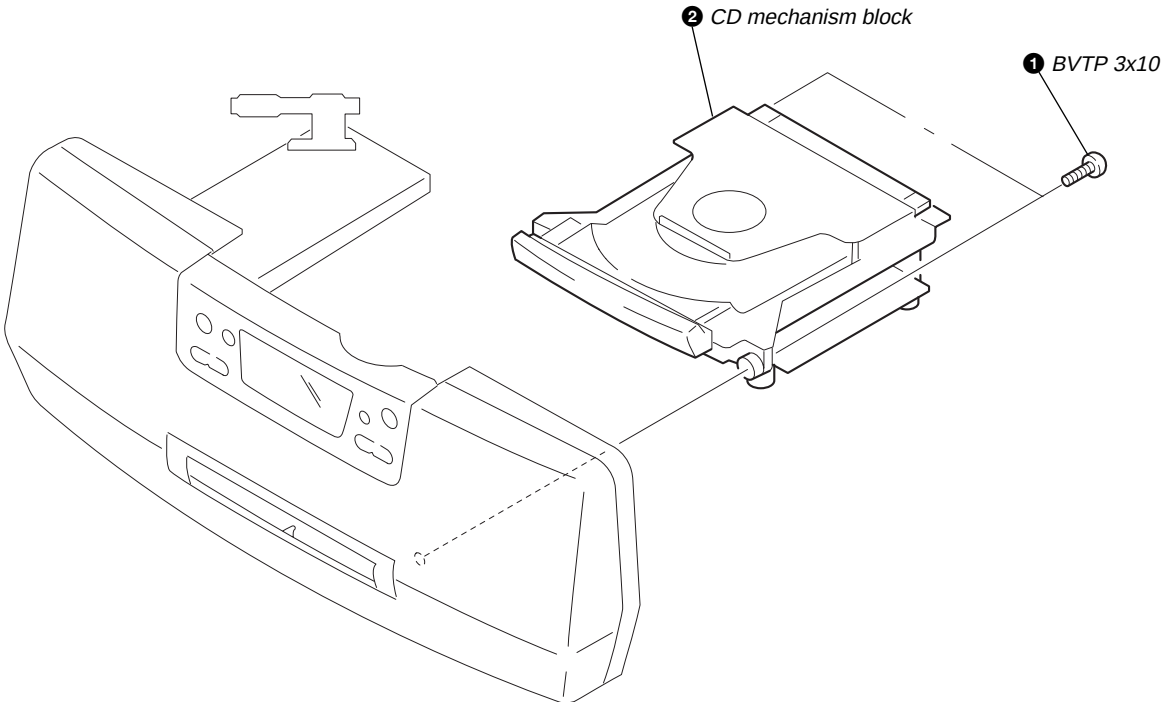

## 2-2. POWER BOARD



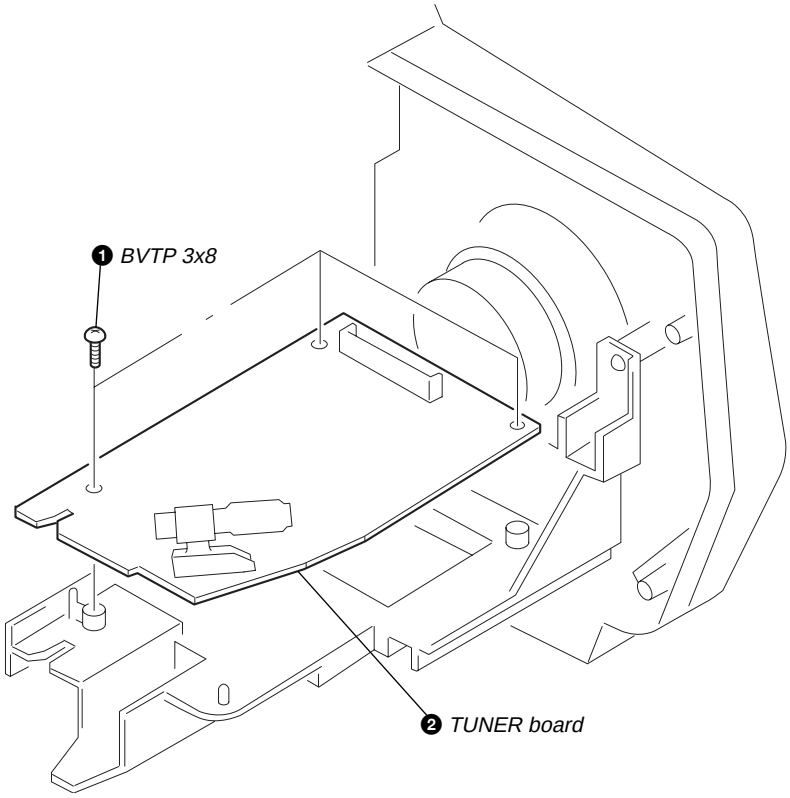
## 2-3. CABINET (UPPER) ASSY



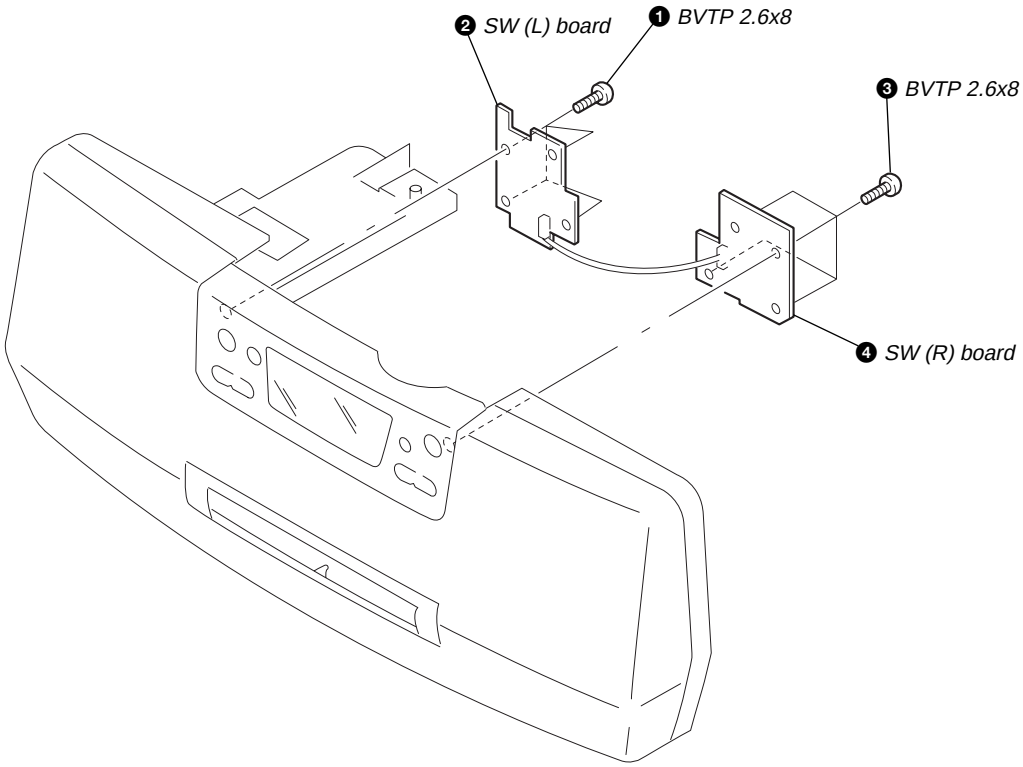

## 2-4. CD MECHANISM BLOCK



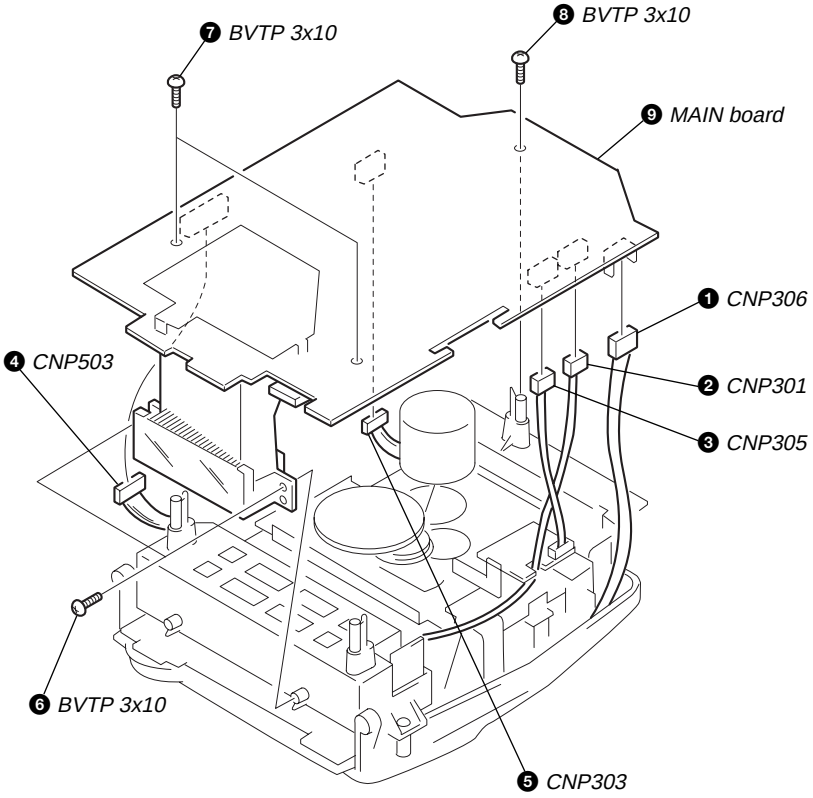
## 2-5. TUNER BOARD



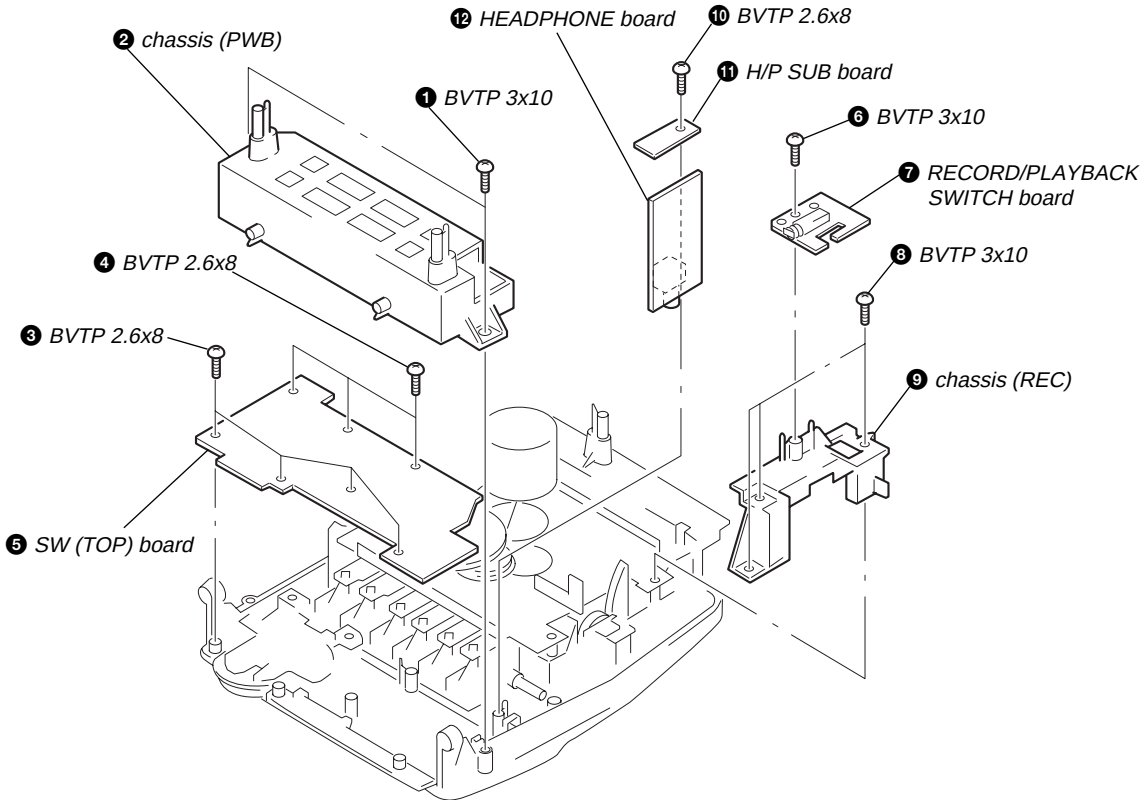

## 2-6. SW (L) BOARD, SW (R) BOARD



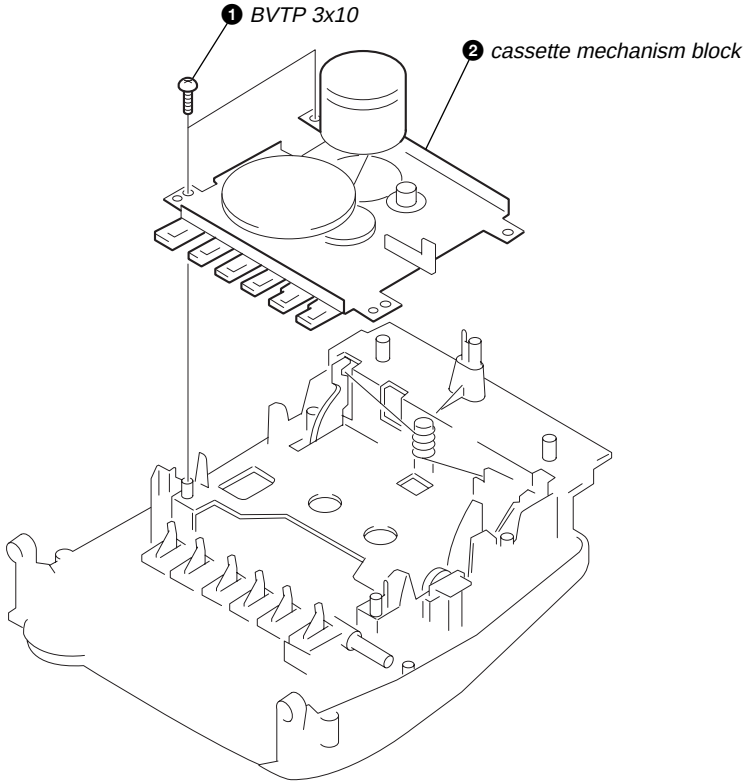
## 2-7. MAIN BOARD



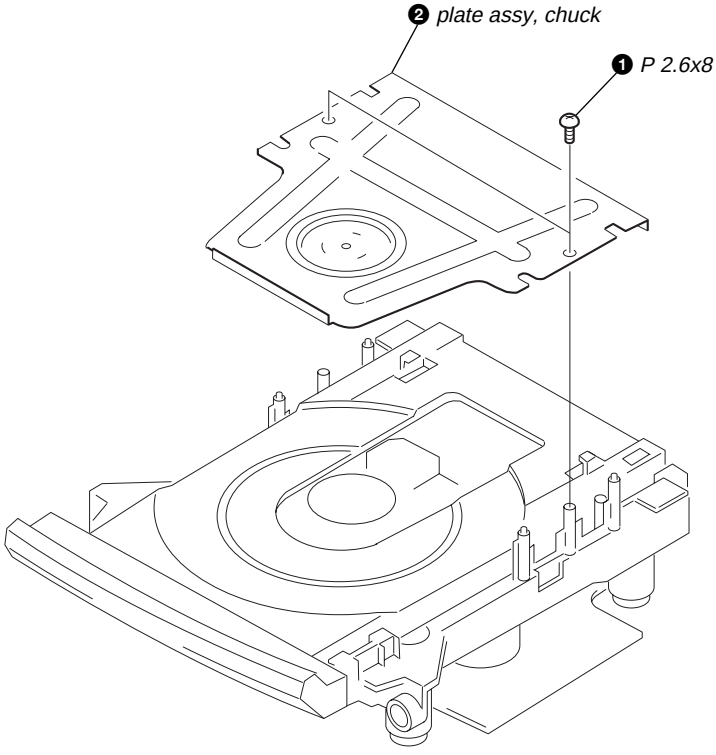

## 2-8. SW (TOP) BOARD, RECORD/PLAYBACK SWITCH BOARD, HEADPHONE BOARD



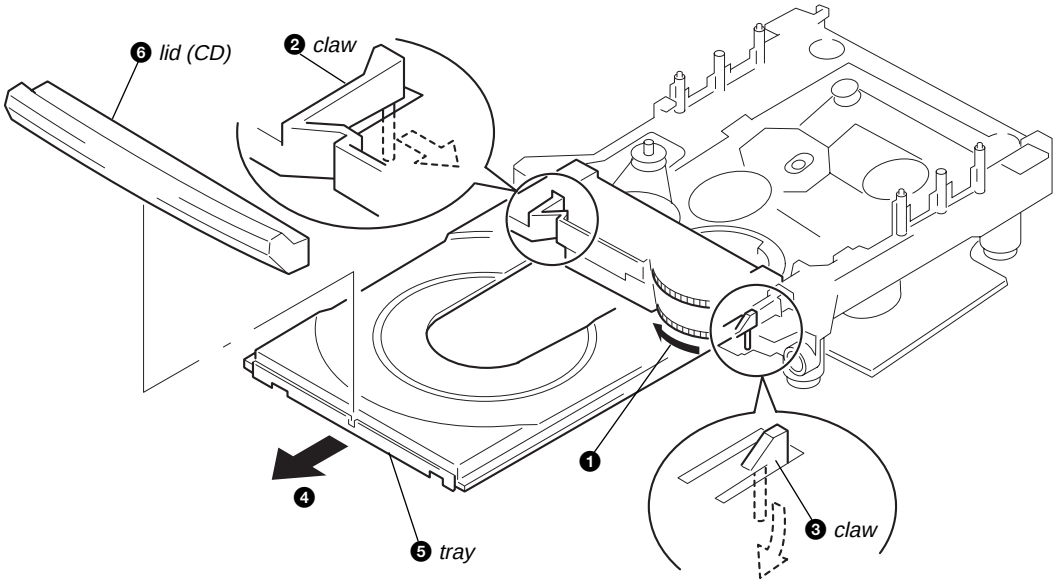
## 2-9. CASSETTE MECHANISM BLOCK



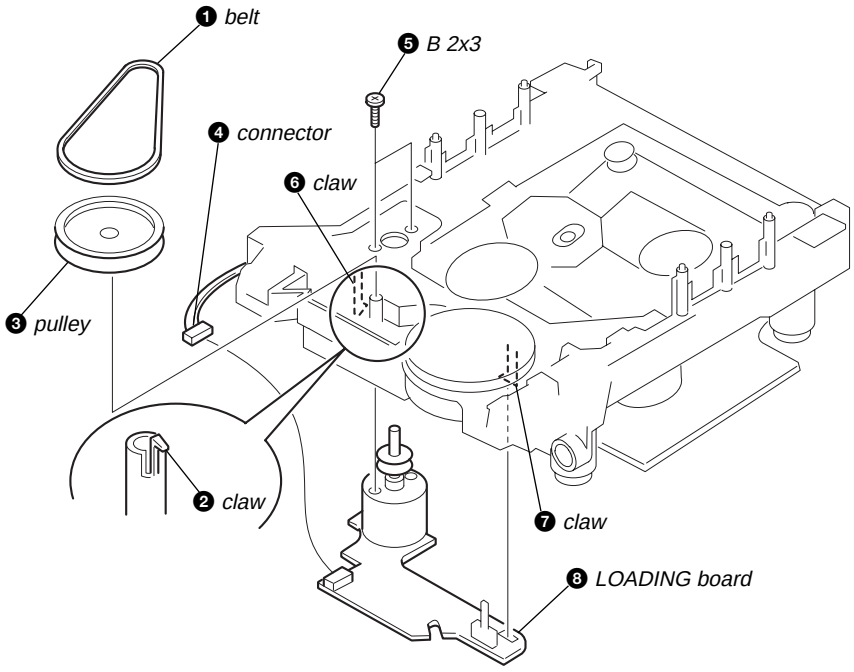

## 2-10. PLATE ASSY, CHUCK



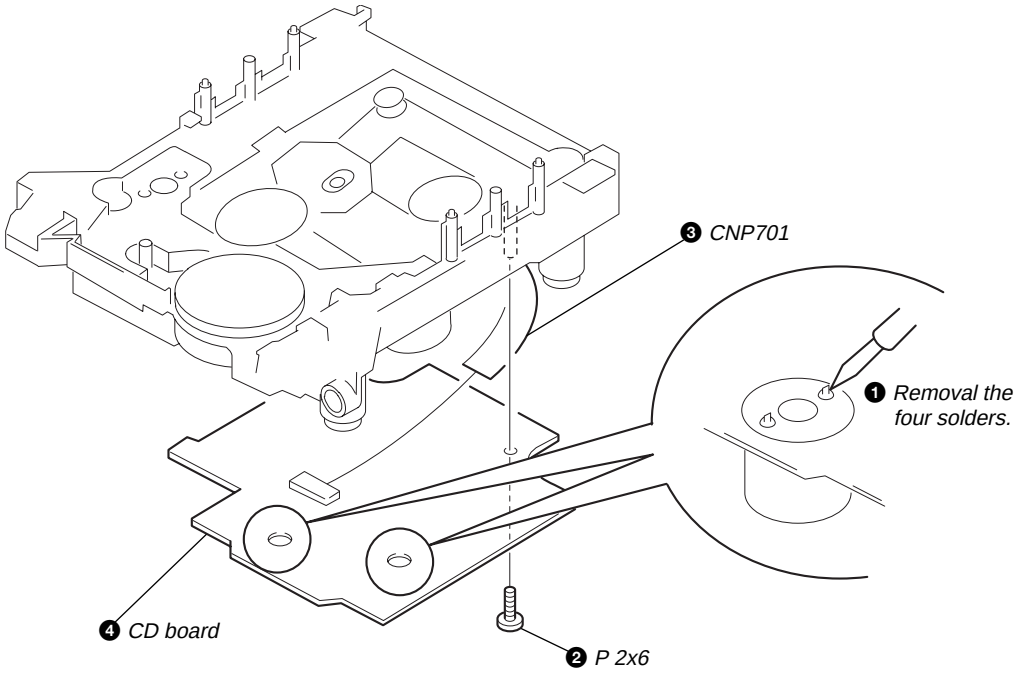
## 2-11. TRAY



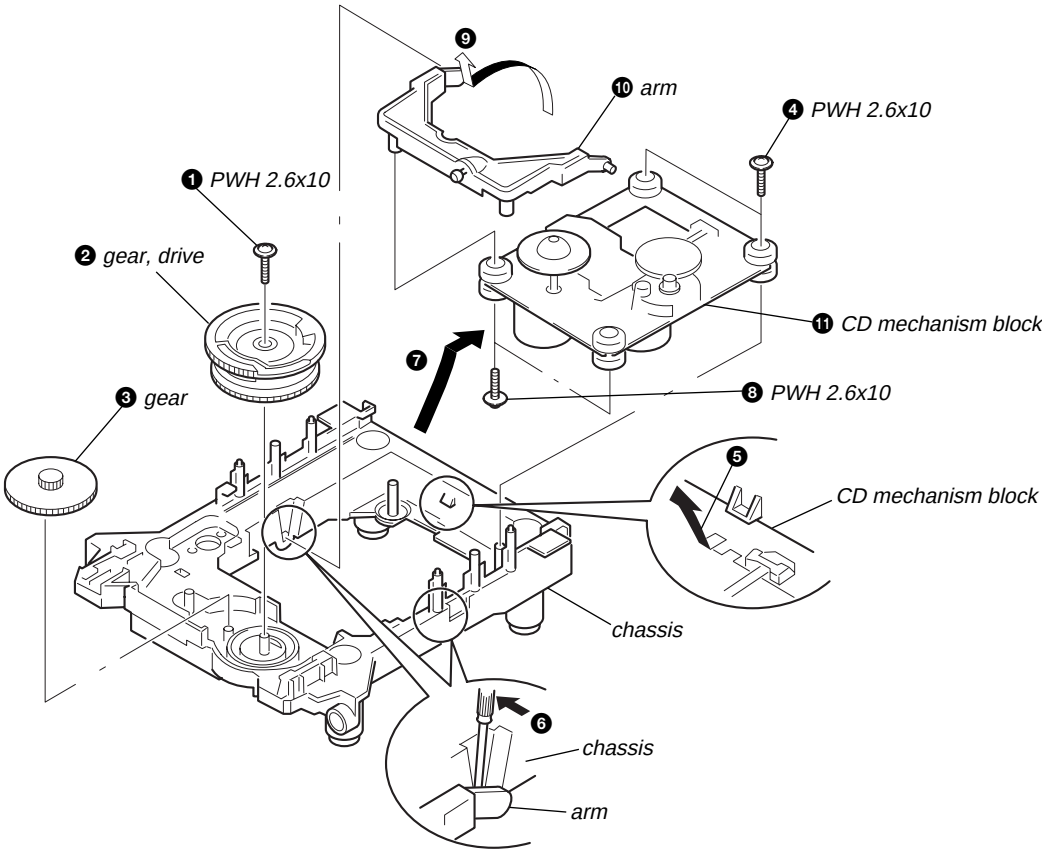

## 2-12. LOADING BOARD



## 2-13. CD BOARD




## 2-14. CD MECHANISM BLOCK



# SECTION 3
# MECHANICAL ADJUSTMENTS

## PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

### Torque Measurement

| Mode | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-102C | 30 – 70 g • cm (0.42 – 0.97 oz • inch) |
| FWD Back Tension | CQ-102C | 1.5 – 5.5 g • cm (0.021 – 0.076 oz • inch) |
| FF | CQ-201B | more than 60 g • cm (more than 0.83 oz • inch) |
| REW | CQ-201B | more than 60 g • cm (more than 0.83 oz • inch) |

### Tape Tension Measurement

| Mode | Tension meter | Meter Reading |
|---|---|---|
| FWD | CQ-403A | more than 100 g (more than 3.53 oz) |

# SECTION 4
# ELECTRICAL ADJUSTMENTS

**TAPE SECTION** **0 dB = 0.775 V**

**• Standard Output Level**

| Output terminal | HP OUT |
|---|---|
| load impedance | 32 Ω |
| output signal level | 0.25 V (–10 dB) |

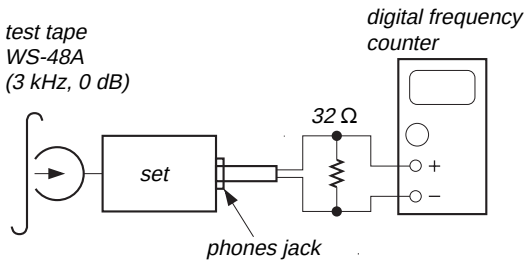
**• Test Tape**

| Type | Signal | Used for |
|---|---|---|
| WS-48A | 3 kHz, 0 dB | tape speed adjustment |

### Tape Speed Adjustment

**Procedure:**

Mode: playback



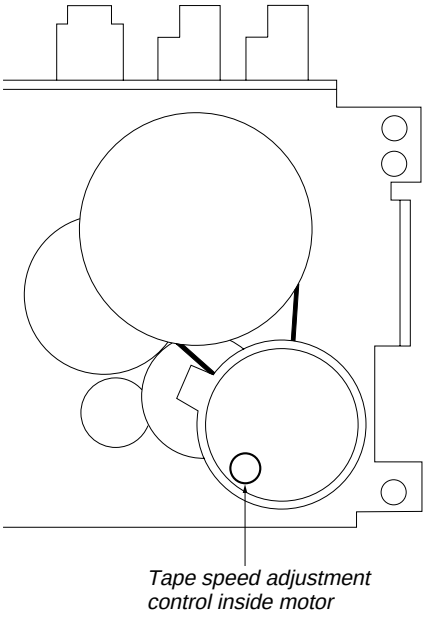

Adjust so that the value on the frequency counter is 3 kHz.

**Specification Value:**

| Digital frequency counter |
|---|
| 2,985 to 3,015 Hz |

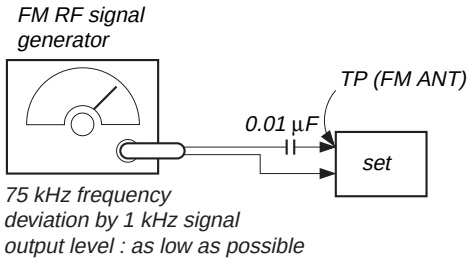
Adjust so that the frequency at the beginning and that at the end of tape winding are between 2,955 to 3,045 Hz.

**Adjustment Location:**

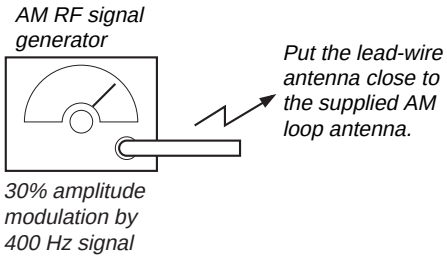


## TUNER SECTION | 0 dB = 1 µV

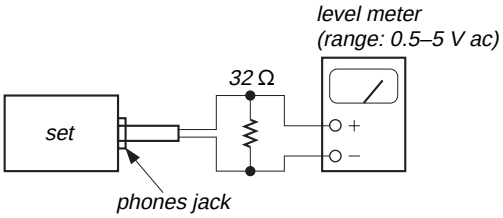
- **FM Section**
  **Setting:**
  BAND switch: FM



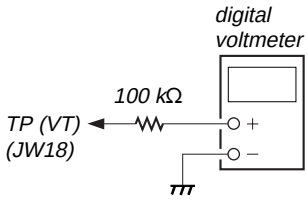

- **AM Section**
  **Setting:**
  BAND switch: AM


AM RF signal generator
Put the lead-wire antenna close to the supplied AM loop antenna.
30% amplitude modulation by 400 Hz signal

- **Connecting Level Meter (FM and AM)**




- **Connecting Digital Voltmeter (FM and AM)**




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

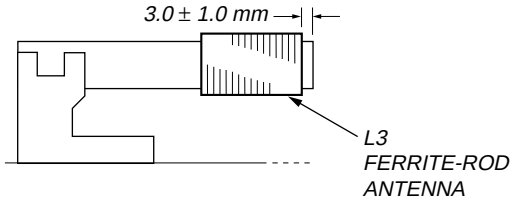
| FM FREQUENCY COVERAGE ADJUSTMENT | | |
|---|---|---|
| Frequency Display | 87.5 MHz | 108 MHz |
| Reading on Digital voltmeter | 1.7 ± 0.4 V | 4.1 ± 0.1V |
| Adjustment Part | <confirmation> | L2 |

| FM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter. | |
| L1 | CT1 |
| 87.5 MHz | 108 MHz |

| AM FREQUENCY COVERAGE ADJUSTMENT | | |
|---|---|---|
| Frequency Display | 530 kHz | 1,710 kHz |
| Reading on Digital voltmeter | 0.9 $^{+\ 0.7\ V}_{-\ 0.5\ V}$ | 4.8 $^{+\ 1.2V}_{-\ 0.6\ V}$ |
| Adjustment Part | <confirmation> | <confirmation> |

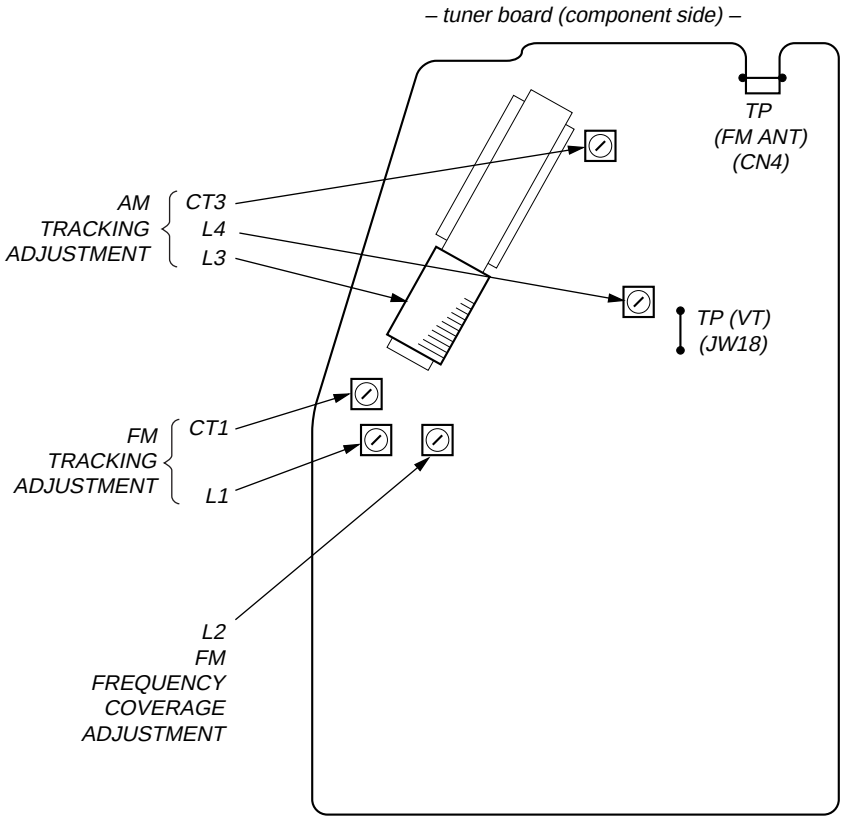
| AM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter. | |
| L4 | CT3 |
| 620 kHz | 1,400 kHz |

- For AM adjustment, fix the ferrite-rod antenna (L3) as shown below and then perform tracking adjustment at L4 and CT3. Lastly check the voltage.




**Adjustment Location:** See page 15.

**Adjustment Location:**




## CD SECTION

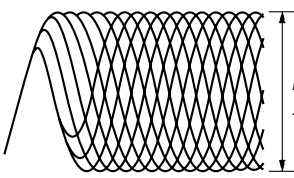
CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

### FOCUS BIAS CHECK

1. Connect the oscilloscope between IC701 pin ㉝ (TP RFO) and GND on CD board.
2. Insert the disc (YEDS-18). (Part No. : 3-702-101-01)
3. Press the ▶II button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

• RF signal reference waveform (eye pattern)

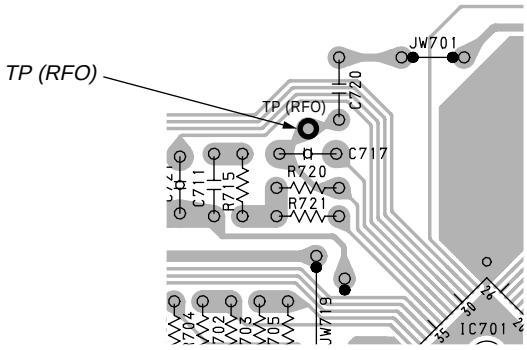
*VOLT/DIV : 200 mV (10 : 1 probe in use)*
*TIME/DIV : 500 nS*




When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

**Test Point:**

*– CD board (conductor side) –*



# SECTION 5
# DIAGRAMS

## 5-1. IC PIN DESCRIPTION

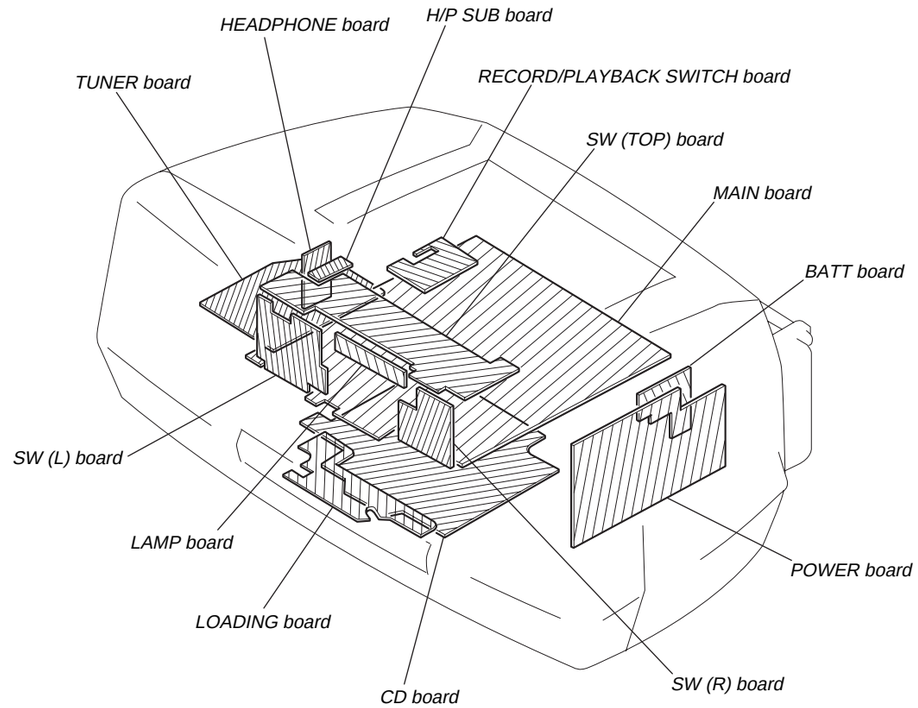
**• IC501 CXP83120A-035Q (SYSTEM CONTROL)**

| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 1 | C-SCOR | I | CD SCOR input |
| 2 | WP | I | Wake-up input |
| 3 | RMC | I | Sircs receiver input |
| 4 | CLOSE-O | O | CD loading motor control output (Loading direction) |
| 5 | OPEN-O | O | CD loading motor control output (Eject direction) |
| 6 | OPEN-I | I | CD open switch input |
| 7 | CLOSE-I | I | CD close switch input |
| 8 | NC | — | Not used. |
| 9 | C-SENS1 | I | CD SENSE-1 input |
| 10 | C-SENS2 | I | CD SENSE-2 input |
| 11 | C-SQCK | O | CD Sub-Q read clock output |
| 12 | C-SQSO | I | CD Sub-Q data input |
| 13 | NC | — | Not used. |
| 14 | C-XRST | O | CD reset output |
| 15 | C-XLT | O | CD serial latch output |
| 16 | C-CLK | O | CD serial clock output |
| 17 | C-DATA | O | CD serial data output |
| 18 | R-ST | O | Stereo ingicator output |
| 19 | R-DATA | O | Tuner PLL data output |
| 20 | R-CLK | O | Tuner PLL clock output |
| 21 | R-COUNT | I | Tuner PLL data input |
| 22 | R-CE | O | Tuner PLL chip enable output |
| 23 | PCON | O | System power control output |
| 24 | V-DATA | O | Volume serial data output |
| 25 | V-CLK | O | Volume serial clock output |
| 26 | V-CE | O | Volume serial chip enable output |
| 27 | REG-CHK | I | Low voltage detection input |
| 28 | B/L-CONT | O | Back light control output |
| 29 | REC | I | Tape record signal input |
| 30 | INI | O | Tuner select initial setting output |
| 31 | LOCAL/DX | I | Input port for ANT sensitivity switching control on FM. (However, the LOCAL/DX function is finally deleted so it is not used.) |
| 32 | VERSION | I | Tuner destination band select input |
| 33 – 36 | KEY-1 – 4 | I | Key input |
| 37 | S-CLK | O | Shift clock output |
| 38 | RST | I | System reset input |
| 39 | EXTAL | I | Oscillation input (4.19 MHz) |
| 40 | XTAL | O | Oscillation output (4.19 MHz) |
| 41 | VSS | — | GND |
| 42 | NC | — | Not used. |
| 43 | VSS | — | GND |
| 44 | AVREF | I | A/D converter VREF input |
| 45 | AVSS | — | Analog GND |
| 46 | VL | O | LCD drive port ON/OFF output |
| 47 – 49 | VLC-3 – 1 | O | LCD drive voltege terminal |
| 50 – 53 | COM0 – 3 | O | LCD drive common output |
| 54 – 76 | SEG0 – 22 | O | LCD drive segment output |
| 77 – 79 | — | — | Not used. |
| 80 | F-TAPE | O | Tape power select control output |
| 81 | F-TU | O | Tuner power select control output |
| 82 | F-CD | O | CD power select control output |

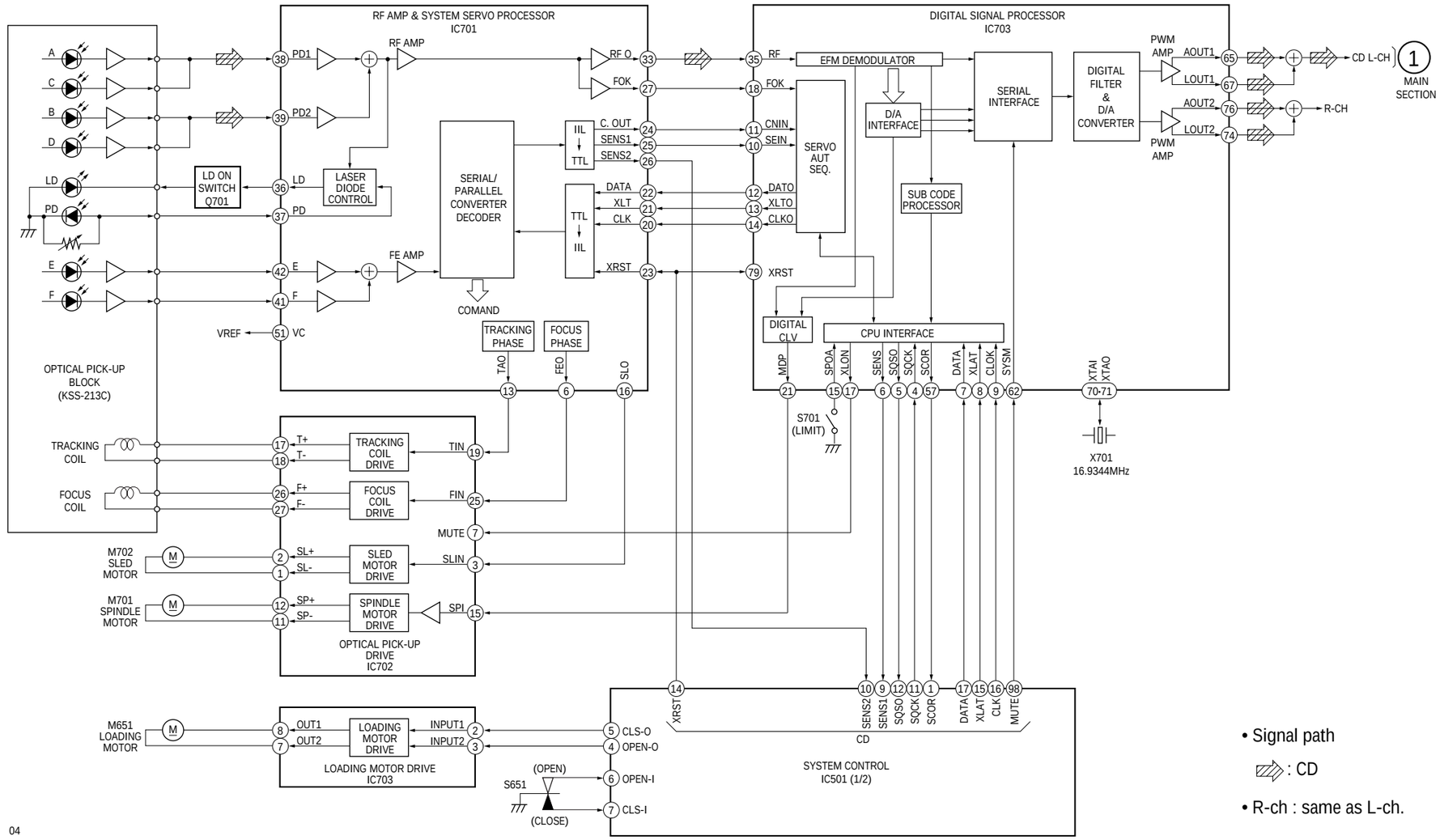
| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 83 | LED ROCK | O | LED (ROCK) drive signal output |
| 84 | LED POP | O | LED (POP) drive signal output |
| 85 | LED LIVE | O | LED (LIVE) drive signal output |
| 86 | LED VOCAL | O | LED (VOCAL) drive signal output |
| 87, 88 | NC | — | Not used. |
| 89 | VDD | — | Power supply pin (+5 V) |
| 90 | NC | — | Not used. |
| 91 | VSS | — | GND |
| 92 | TX | O | Oscillation output (32.768 kHz) |
| 93 | TEX | I | Oscillation input (32.768 kHz) |
| 94 | ISS1 | O | Tape ISS1 control output |
| 95 | ISS2 | O | Tape ISS2 control output |
| 96 | A-MUTE | O | Audio mute output |
| 97 | R-MUT | O | Tuner mute output |
| 98 | C-MUT | O | CD mute output |
| 99 | TC1 | I | Tape play switch input |
| 100 | — | — | Not used (Connect to GND). |



## 5-2. CIRCUIT BOARDS LOCATION



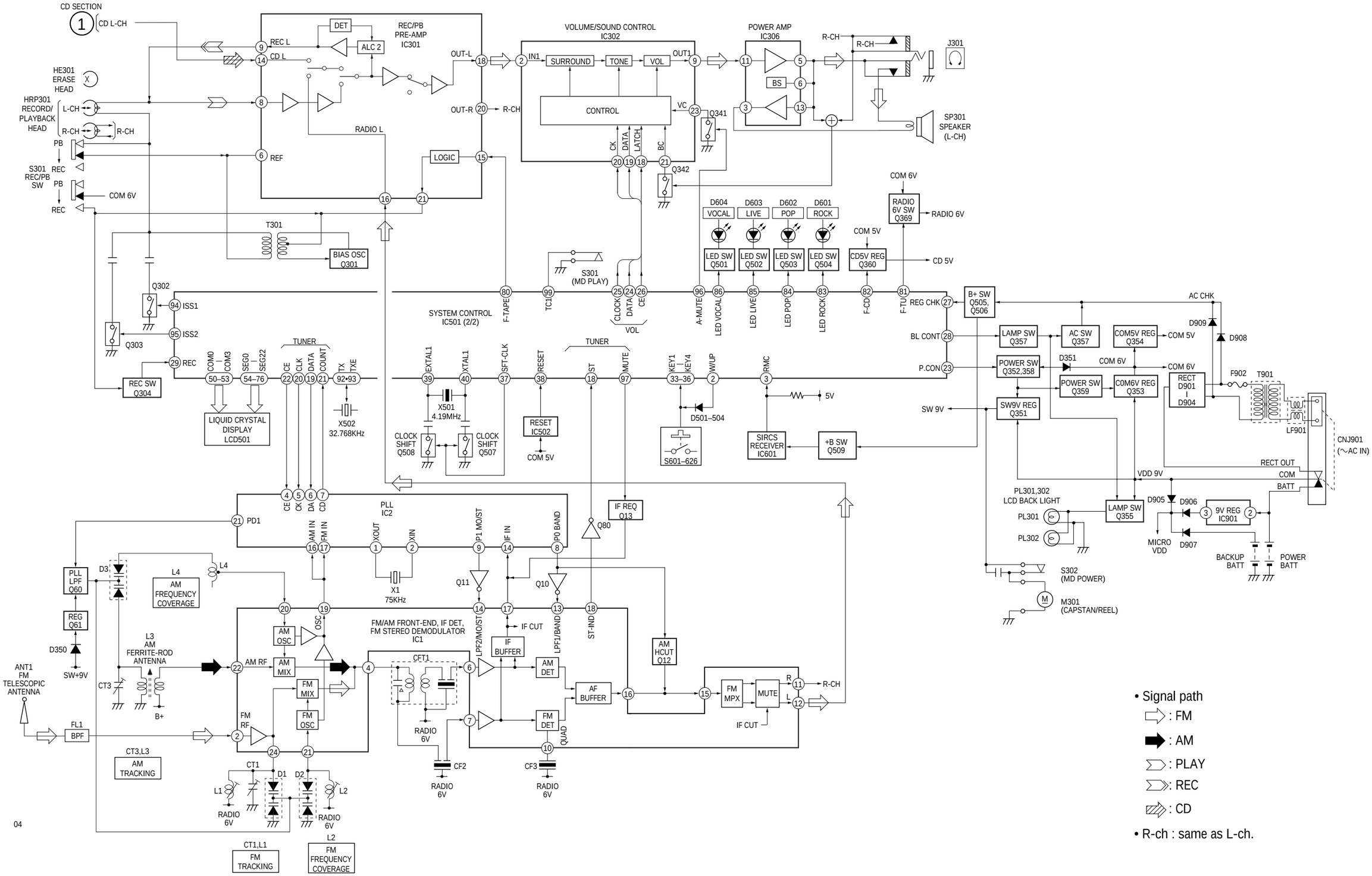
## 5-3. BLOCK DIAGRAM — CD SECTION —




04

- Signal path
  : CD
- R-ch : same as L-ch.

## 5-4. BLOCK DIAGRAM — MAIN SECTION —




- Signal path
  - : FM
  - : AM
  - : PLAY
  - : REC
  - : CD
- R-ch : same as L-ch.

• **Semiconductor Location**

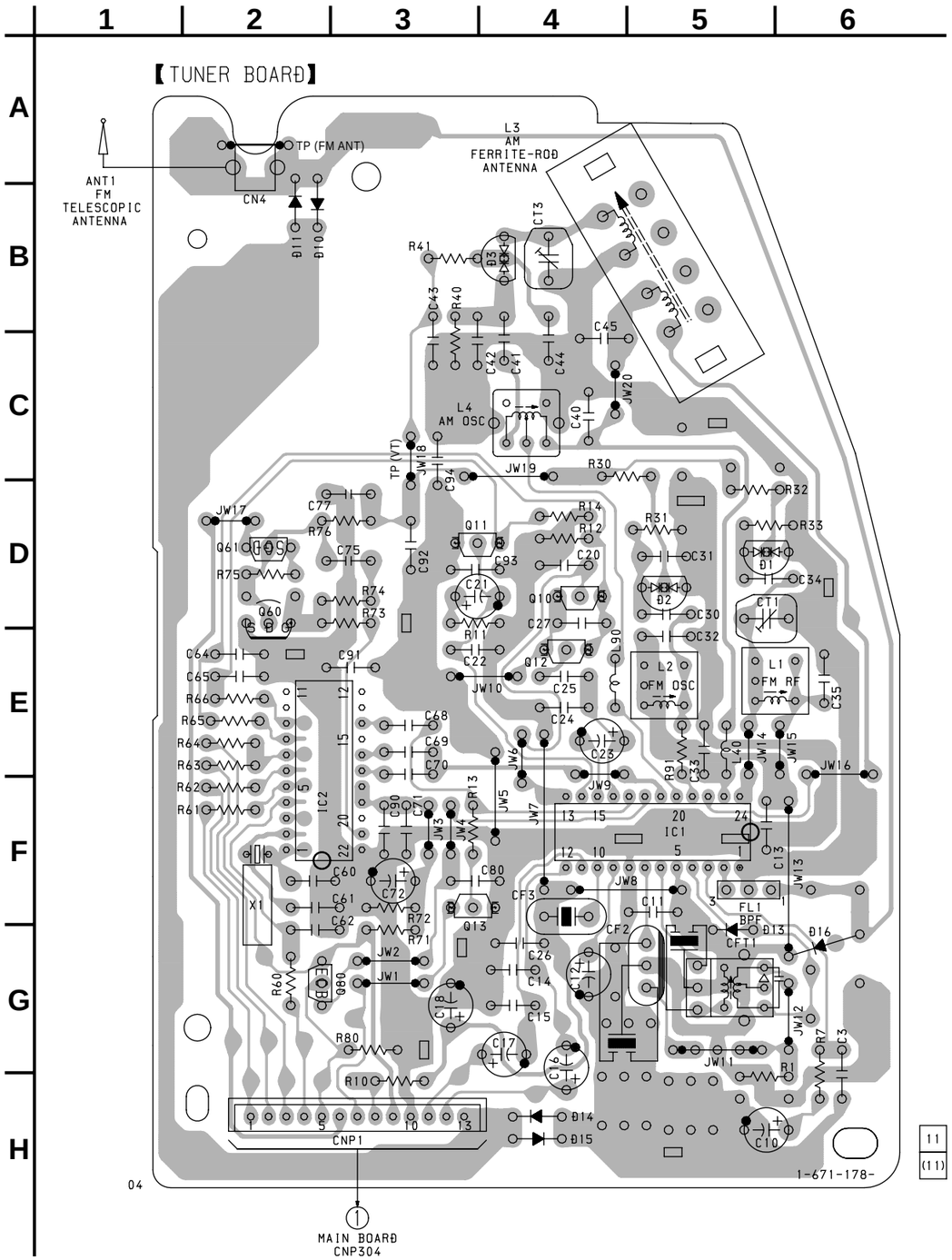
| Ref. No. | Location |
|---|---|
| D1 | D-5 |
| D2 | D-5 |
| D3 | B-4 |
| D10 | B-2 |
| D11 | B-2 |
| D13 | G-5 |
| D14 | H-4 |
| D15 | H-4 |
| D16 | G-6 |
| | |
| IC1 | F-5 |
| IC2 | F-2 |
| | |
| Q10 | D-4 |
| Q11 | D-3 |
| Q12 | E-4 |
| Q13 | F-3 |
| Q60 | D-2 |
| Q61 | D-2 |
| Q80 | G-2 |

**Note on Printed Wiring Boards:**
- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

**Note on Schematic Diagram:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.

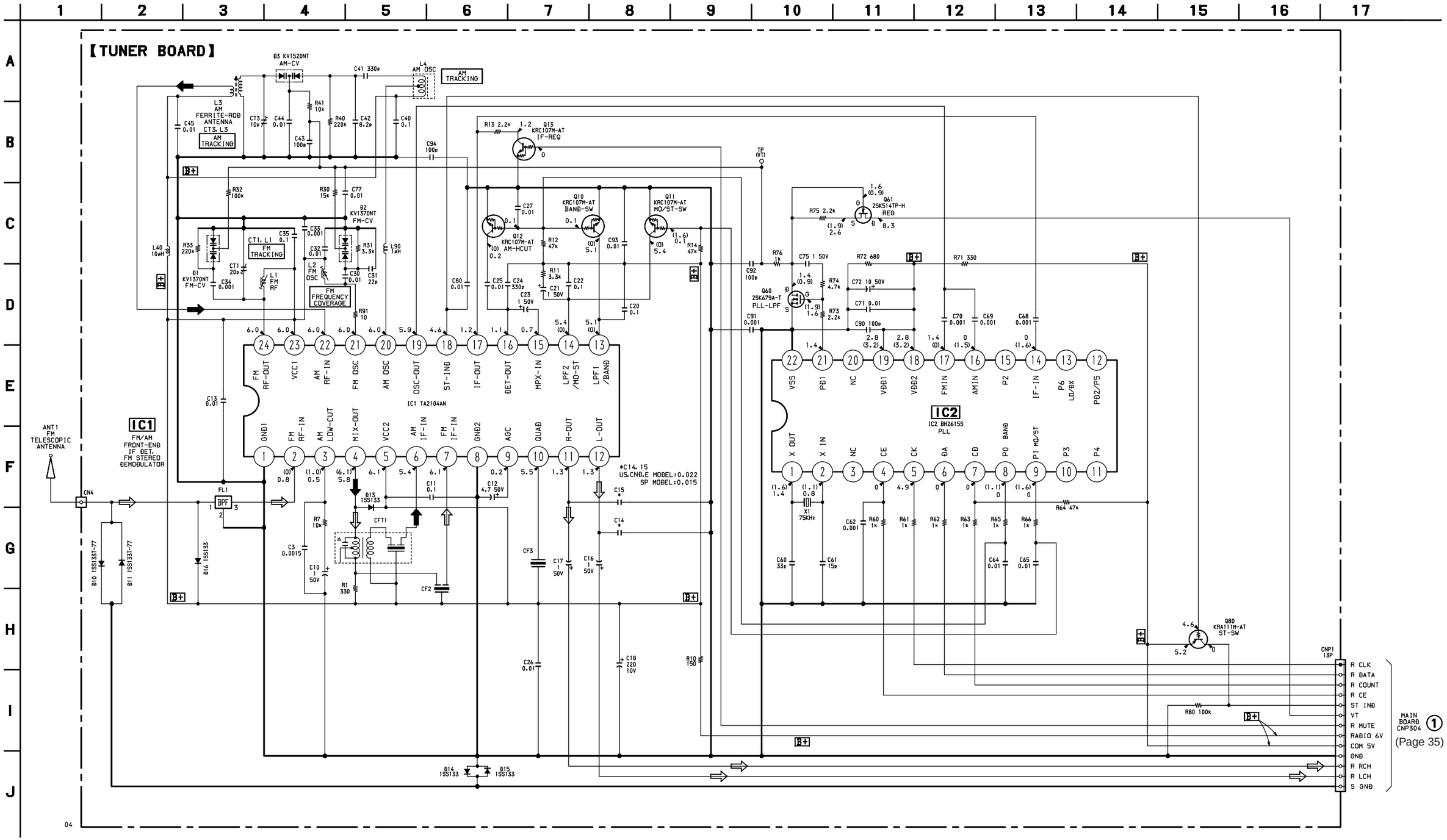


## 5-5. PRINTED WIRING BOARD — TUNER SECTION — • Refer to page 18 for Circuit Boards Location.

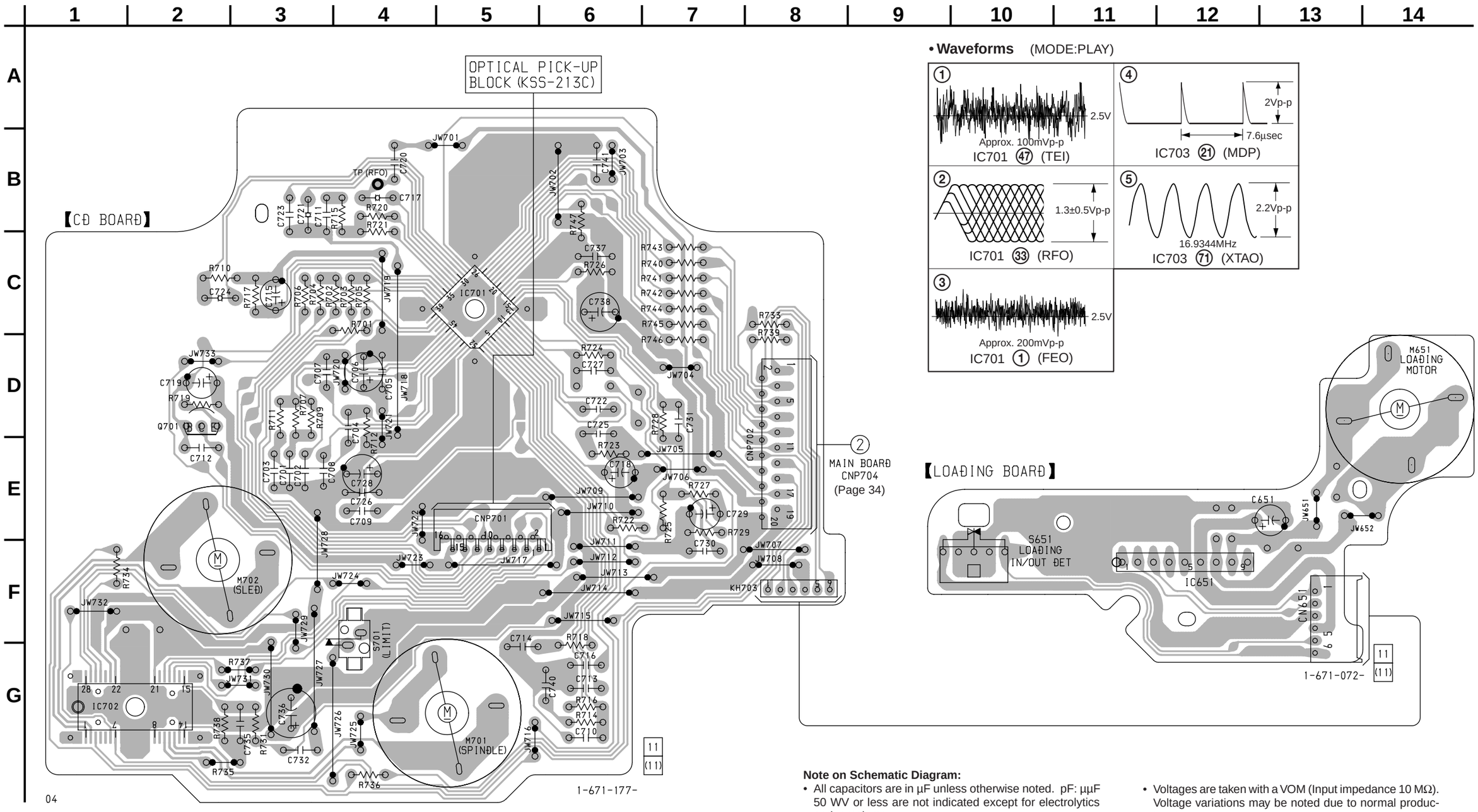



(Page 34)

## 5-6. SCHEMATIC DIAGRAM — TUNER SECTION — • Refer to page 41 for IC Block Diagrams.



**5-7. PRINTED WIRING BOARDS — CD SECTION — • Refer to page 18 for Circuit Boards Location.**




• **Waveforms** (MODE:PLAY)




• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| IC651 | F-12 |
| IC701 | C-5 |
| IC702 | G-2 |
| Q701 | D-2 |

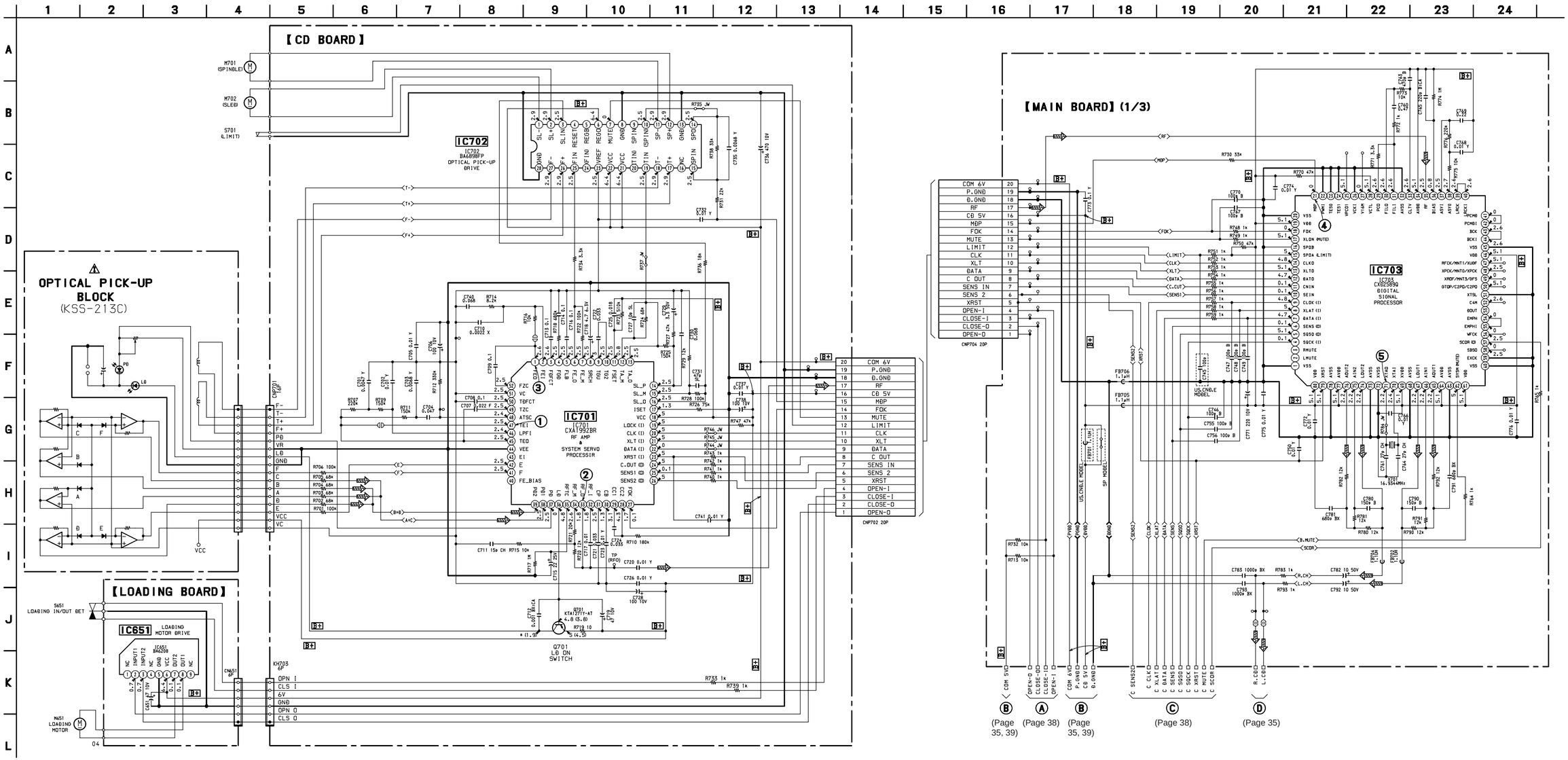
**Note on Printed Wiring Boards:**
- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

**Note on Schematic Diagram:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

- B+ : B+ Line.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path. ⇨ : CD
- Abbreviation CND : Canadian model. SP : Singapore model.

5-8. SCHEMATIC DIAGRAM — CD SECTION — • Refer to page 42 for IC Block Diagrams.

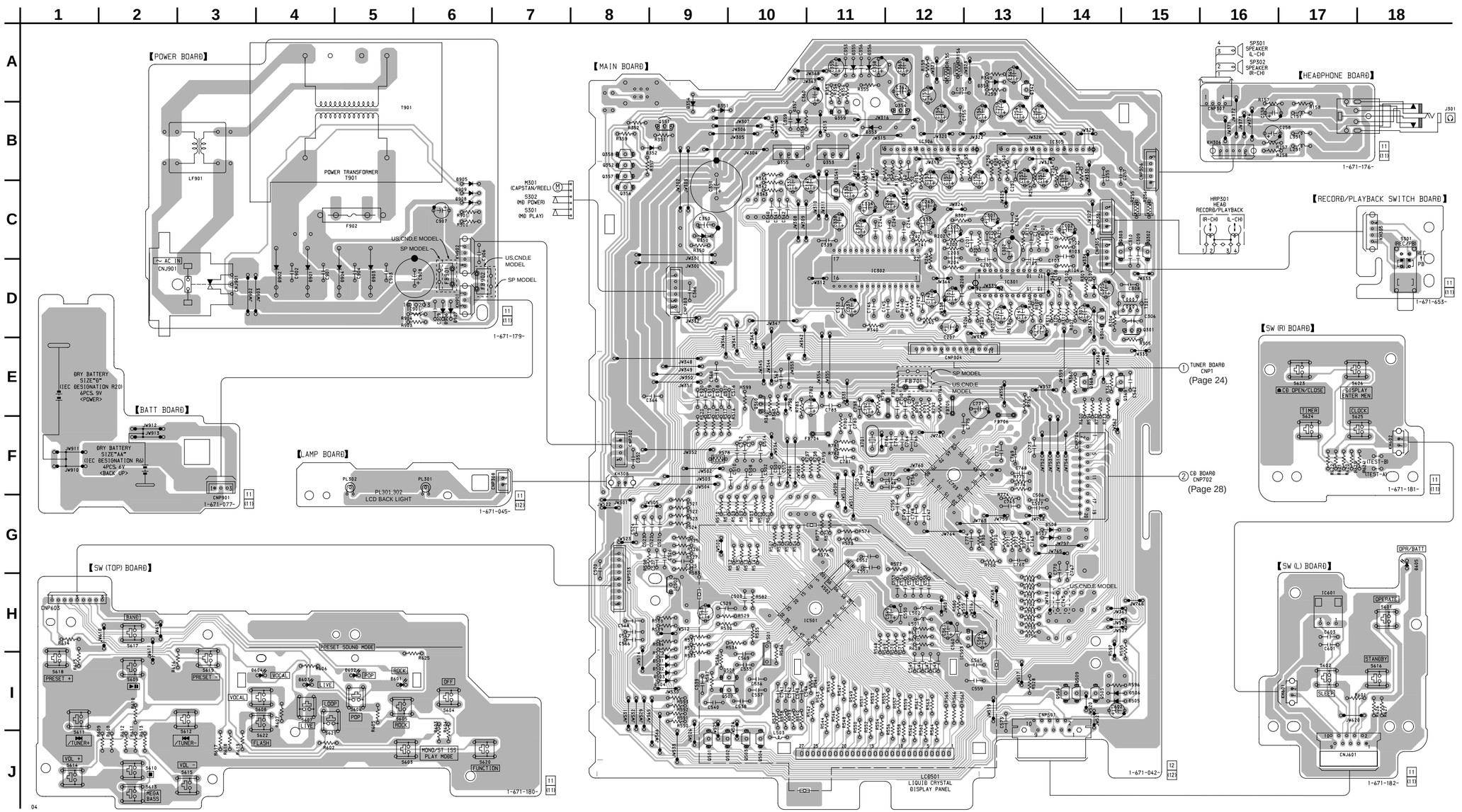


## 5-9. PRINTED WIRING BOARDS — MAIN SECTION — • Refer to page 18 for Circuit Boards Location.

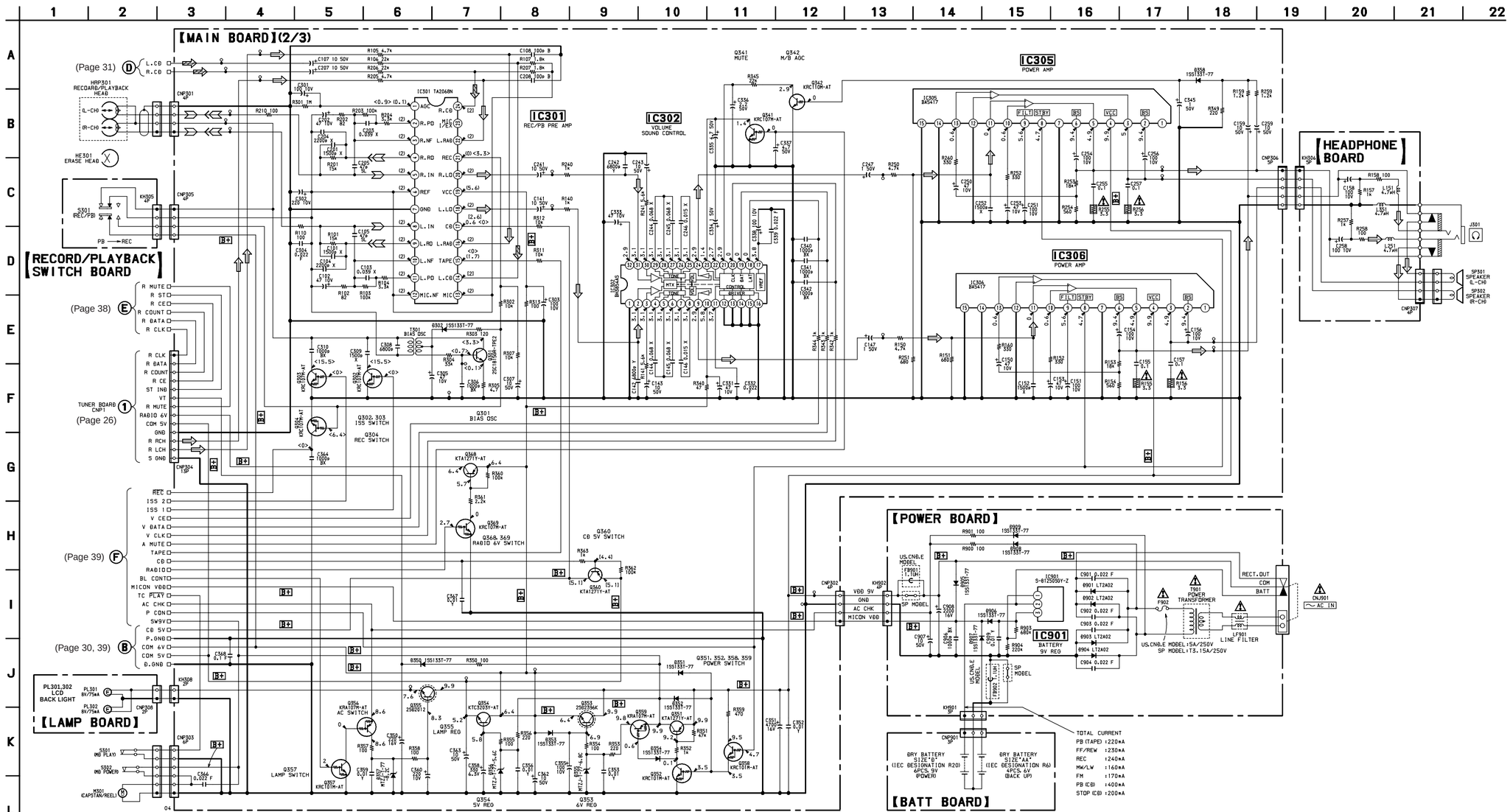
• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D302 | D-14 |
| D350 | C-9 |
| D351 | B-9 |
| D352 | B-9 |
| D353 | B-11 |
| D354 | B-9 |
| D355 | A-11 |
| D356 | A-11 |
| D357 | B-10 |
| D358 | A-13 |
| D501 | I-9 |
| D502 | I-9 |
| D503 | I-9 |
| D504 | I-9 |
| D505 | I-15 |
| D506 | I-15 |
| D507 | G-13 |
| D508 | G-14 |
| D601 | I-5 |
| D602 | I-5 |
| D603 | I-4 |
| D604 | I-4 |
| D901 | D-4 |
| D902 | D-4 |
| D903 | D-5 |
| D904 | D-5 |
| D905 | C-6 |
| D906 | D-6 |
| D907 | D-6 |
| D908 | C-6 |
| D909 | C-6 |
| | |
| IC301 | D-13 |
| IC302 | D-11 |
| IC305 | B-14 |
| IC306 | B-12 |
| IC501 | H-11 |
| IC502 | H-9 |
| IC503 | I-12 |
| IC703 | F-12 |
| IC901 | D-6 |
| | |
| Q301 | D-15 |
| Q302 | C-15 |
| Q303 | C-14 |
| Q304 | D-14 |
| Q341 | B-11 |
| Q342 | A-13 |
| Q351 | B-9 |
| Q352 | B-8 |
| Q353 | B-11 |
| Q354 | B-12 |
| Q355 | B-10 |
| Q356 | C-8 |
| Q357 | B-8 |
| Q358 | B-8 |
| Q359 | B-11 |
| Q360 | E-10 |
| Q368 | E-14 |
| Q369 | E-15 |
| Q501 | J-9 |
| Q502 | J-9 |
| Q503 | J-10 |
| Q504 | J-10 |
| Q505 | I-14 |
| Q506 | I-14 |
| Q507 | I-9 |
| Q508 | I-9 |
| Q509 | I-14 |

**Note:**
- ○——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.



**5-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 41 for IC Block Diagrams.**



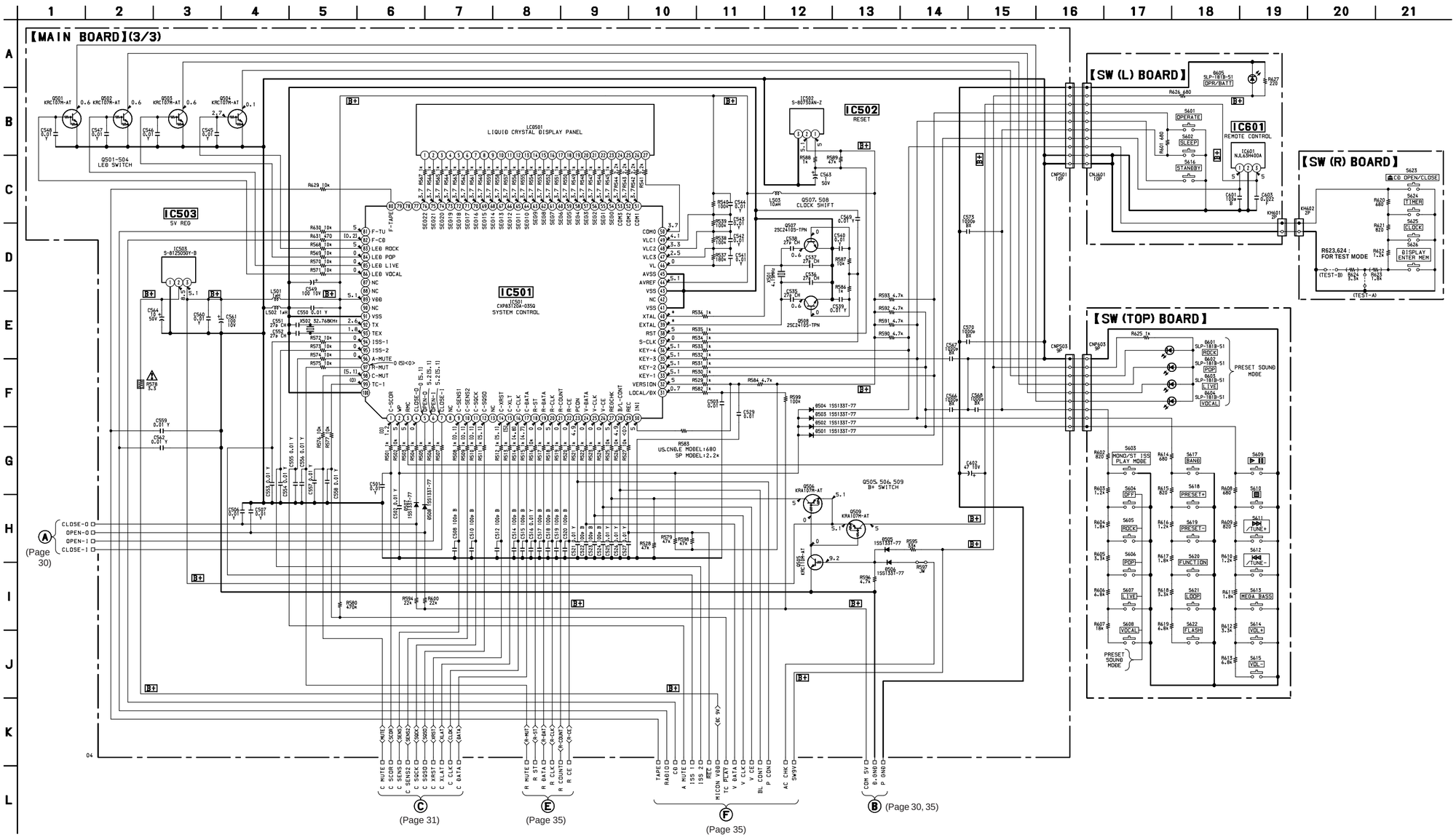

**Note:**

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

- B+ : B+ Line.
- Total current is measured with no cassette installed.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : COMMON
  ( ) : TAPE (PB)
  < > : TAPE (REC)
  [ ] : CD STOP
- Signal path.
  ⇨ : FM
  ⇨ : PB
  ⇨ : REC
  ⇨ : CD
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.

## 5-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) —



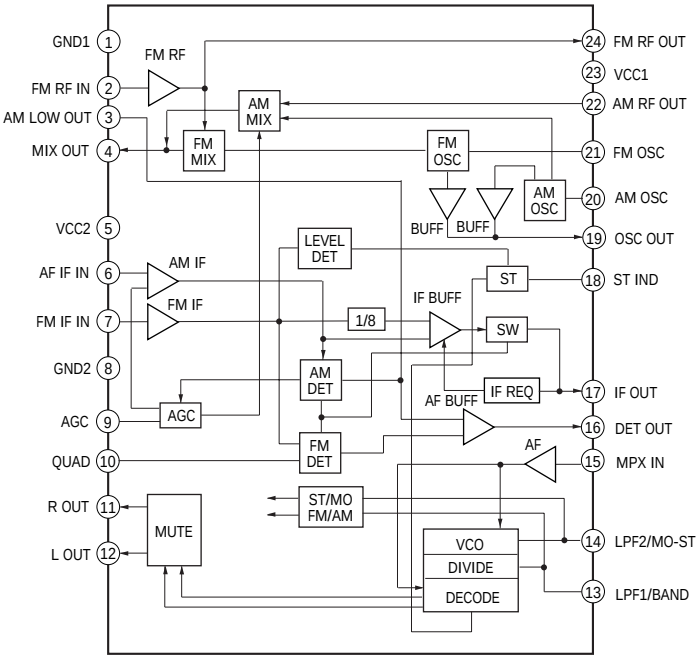

**Note:**
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ▭ : panel designation.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

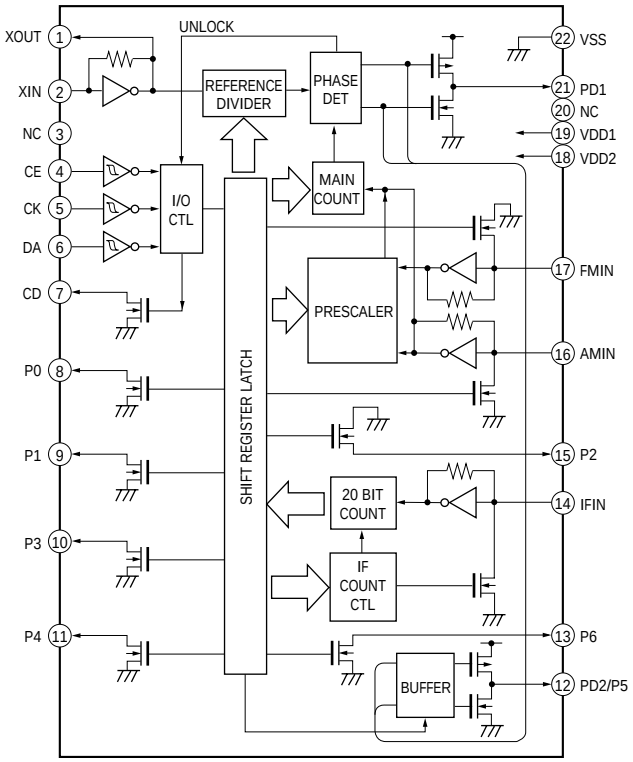
- B+ : B+ Line.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : TAPE (PB)
  < > : TAPE (REC)
  [ ] : CD STOP
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.

**• IC Block Diagrams**

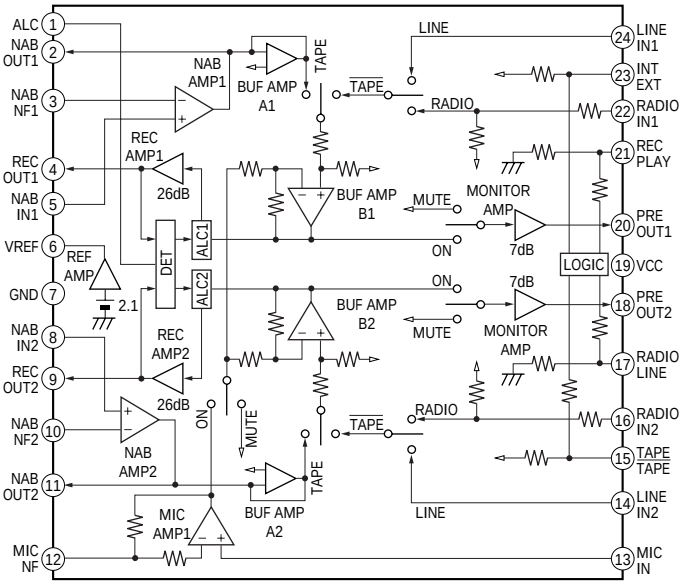
**IC1 TA2104AN**



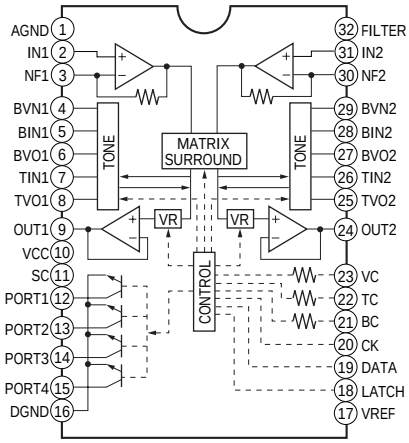

**IC2 BH2615S**



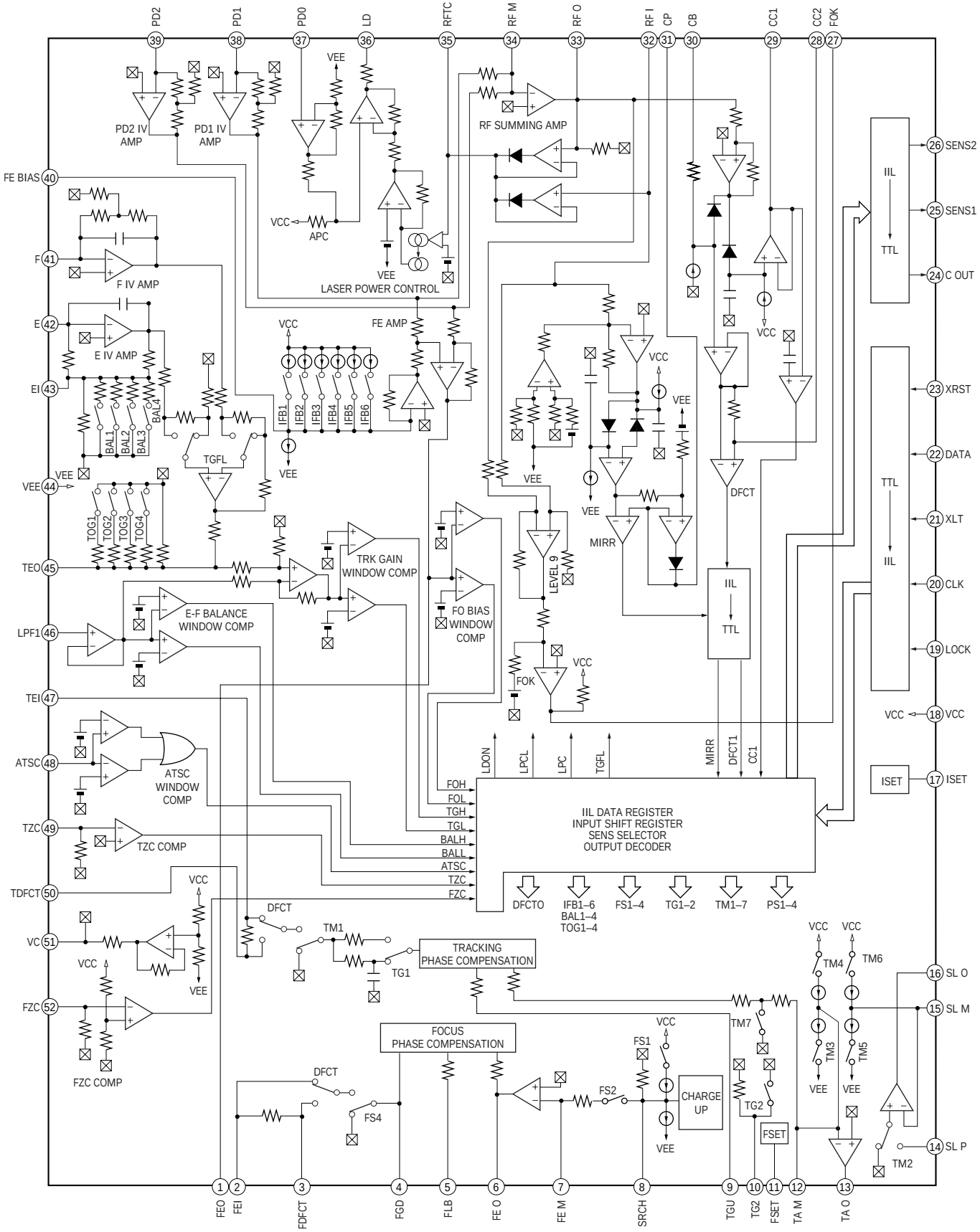

**IC301 TA2068N**



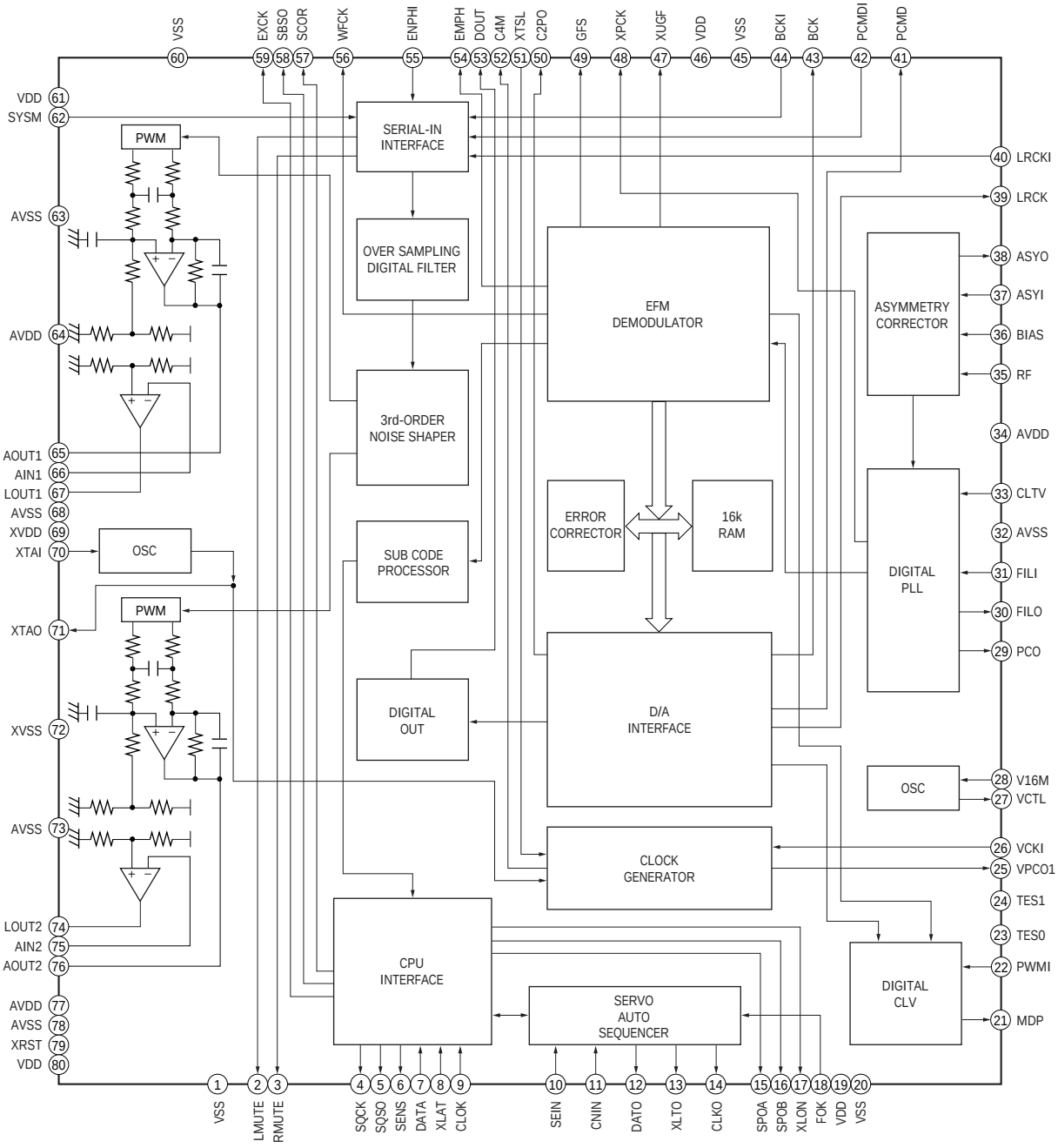

**IC302 BH3854AFS**



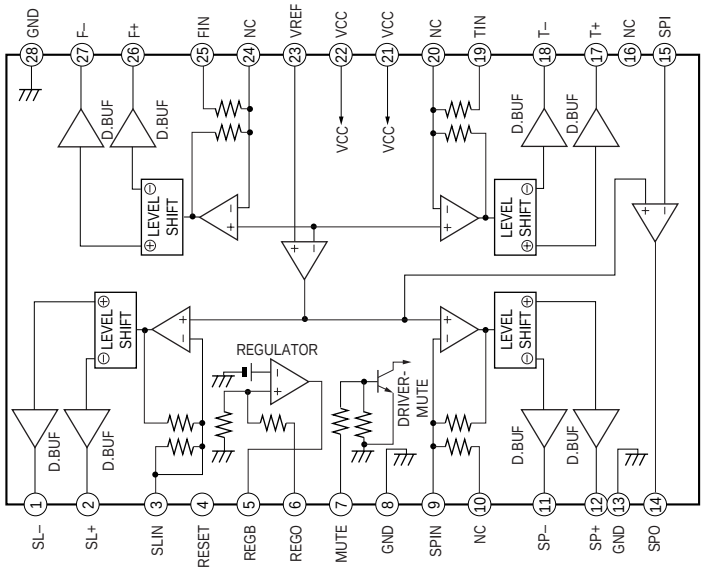
**IC701 CXA1992BR**



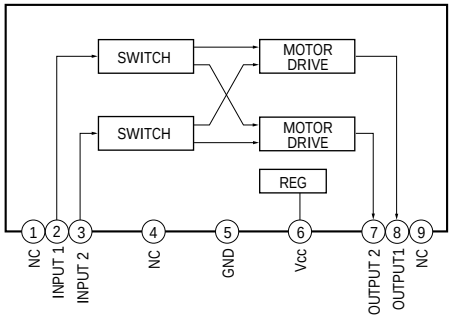
## IC703 CXD2589Q




## IC702 BA6898FP




## IC651 BA6208



# SECTION 6
# EXPLODED VIEWS

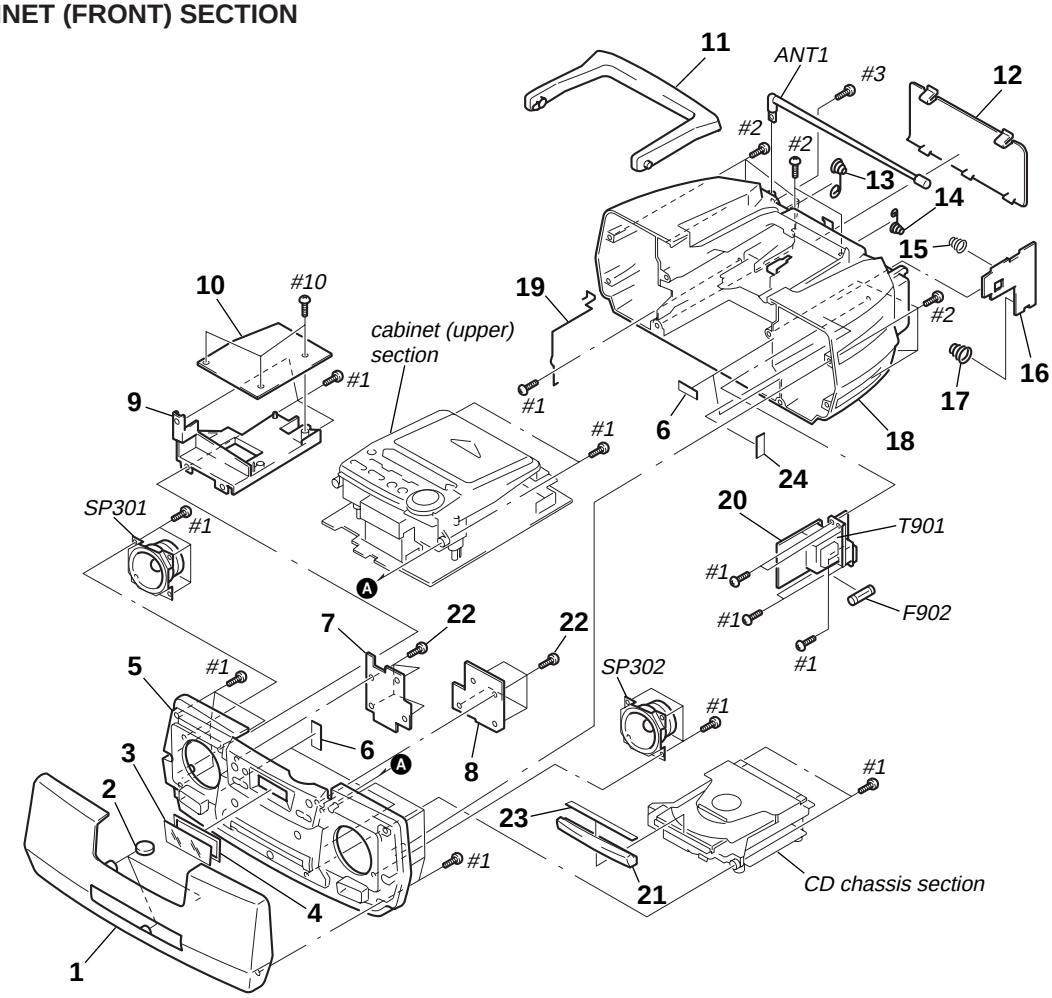
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
  SP : Singapore model
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

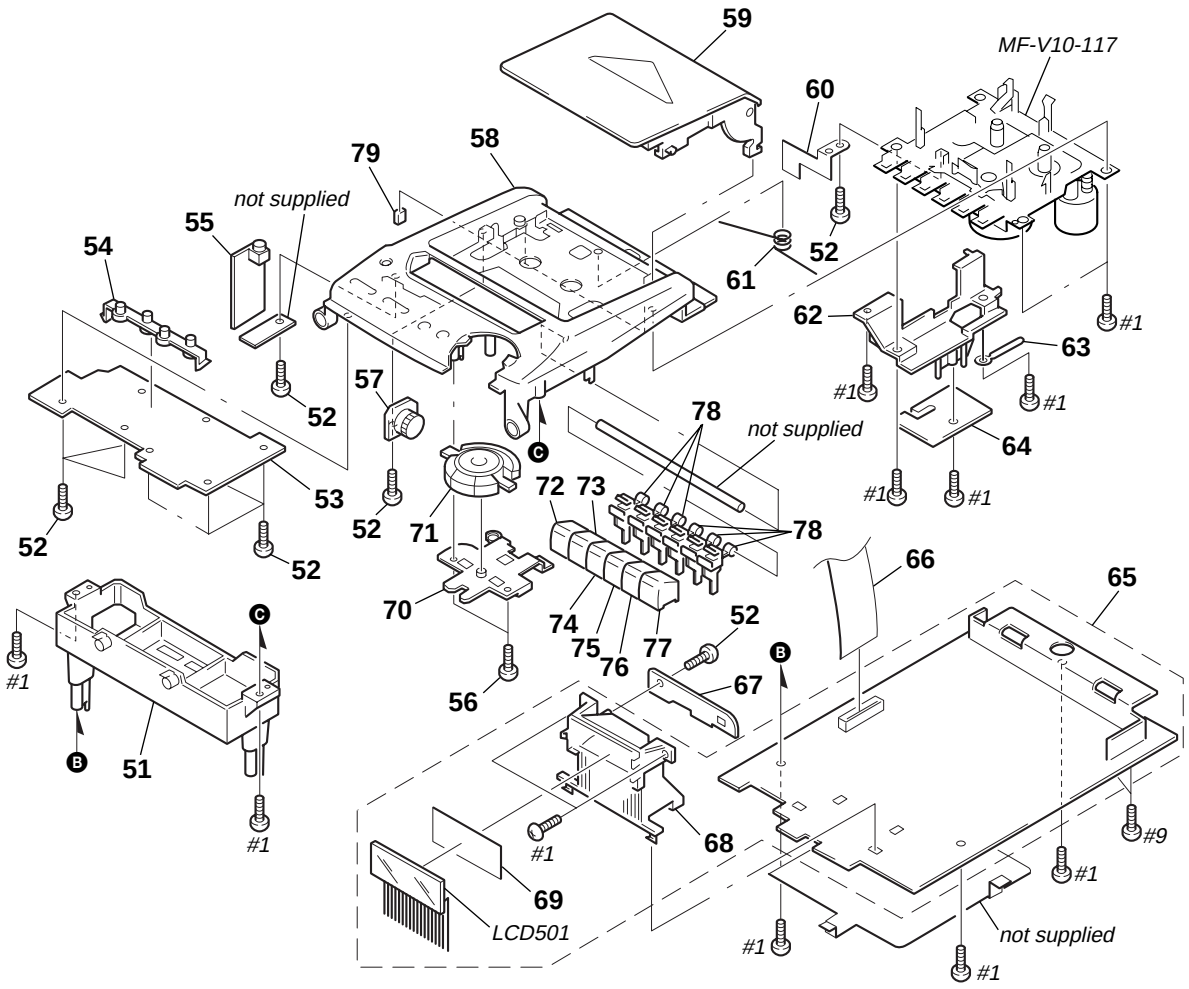
## 6-1. CABINET (FRONT) SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-3376-102-1 | PANEL (FRONT) ASSY (BLACK) | |
| 1 | X-3376-251-1 | PANEL (FRONT) ASSY (DARK BLUE) | |
| 2 | 4-212-330-01 | BUSHING | |
| 3 | 3-028-128-01 | WINDOW (LCD) | |
| * 4 | 3-028-140-01 | SHEET, ADHESIVE | |
| 5 | X-3376-389-1 | CABINET (FRONT) ASSY | |
| 6 | 3-831-441-99 | CUSHION, SPEAKER | |
| * 7 | 1-671-182-11 | SW (L) BOARD | |
| * 8 | 1-671-181-11 | SW (R) BOARD | |
| * 9 | 3-028-107-01 | CHASSIS (TU) | |
| * 10 | A-3321-667-A | TUNER BOARD, COMPLETE (US,CND,E) | |
| * 10 | A-3321-920-A | TUNER BOARD, COMPLETE (SP) | |
| 11 | 3-028-168-01 | HANDLE | |
| 12 | 4-982-685-01 | LID, BATTERY CASE | |
| 13 | 3-029-701-01 | SPRING (+-), TERMINAL COIL | |
| 14 | 3-028-157-01 | TERMINAL (S) (+.-), BATT | |
| 15 | 3-028-154-01 | TERMINAL (-), BATT | |
| * 16 | 1-671-077-11 | BATT BOARD | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 17 | 3-028-156-01 | TERMINAL (S) (-), BATT | |
| 18 | 3-028-105-11 | CABINET (REAR) (US,CND,E) | |
| 18 | 3-028-105-41 | CABINET (REAR) (SP) | |
| 19 | 3-028-134-01 | TERMINAL, ANTENNA | |
| * 20 | 1-671-179-11 | POWER BOARD | |
| 21 | 3-028-153-01 | LID (CD) | |
| 22 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 23 | 3-030-742-01 | COVER, CD LID | |
| * 24 | 3-703-044-26 | LABEL, CAUTION (US) | |
| ANT1 | 1-501-480-11 | ANTENNA, TELESCOPIC | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15AL/250V) (SP) | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) (US,CND,E) | |
| SP301 | 1-529-131-11 | SPEAKER (8cm) (L-CH) | |
| SP302 | 1-529-131-11 | SPEAKER (8cm) (R-CH) | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,CND,E) | |

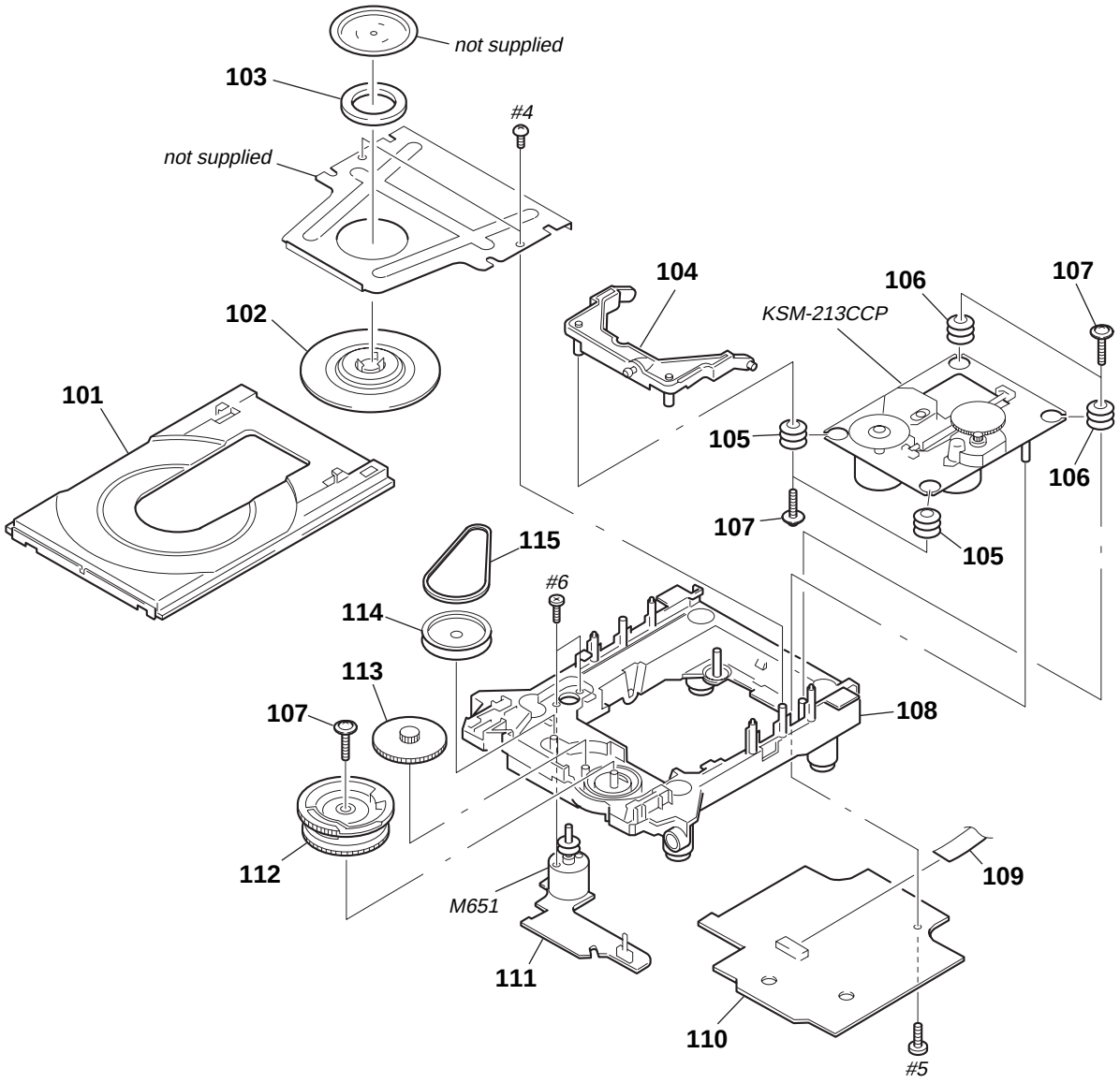
## 6-2. CABINET (UPPER) SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 51 | 3-028-121-01 | CHASSIS (PWB) | |
| 52 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| * 53 | 1-671-180-11 | SW (TOP) BOARD | |
| 54 | 3-028-125-01 | HOLDER (LED) | |
| * 55 | 1-671-176-11 | HEADPHONE BOARD | |
| 56 | 4-951-620-11 | SCREW (2.6X10), +BVTP | |
| 57 | 3-922-112-21 | DAMPER | |
| 58 | X-3376-264-1 | CABINET (TOP) ASSY | |
| 59 | X-3376-101-1 | HOLDER (CASSETTE) ASSY | |
| 60 | 3-028-132-01 | LEVER (REC) | |
| 61 | 3-028-127-01 | SPRING (CASSETTE) | |
| * 62 | 3-028-122-01 | CHASSIS (REC) | |
| * 63 | 3-703-150-11 | CLAMP | |
| * 64 | 1-671-653-11 | RECORD/PLAYBACK SWITCH BOARD | |
| * 65 | A-3321-663-A | MAIN BOARD, COMPLETE (US,CND,E) | |
| * 65 | A-3321-767-A | MAIN BOARD, COMPLETE (SP) | |

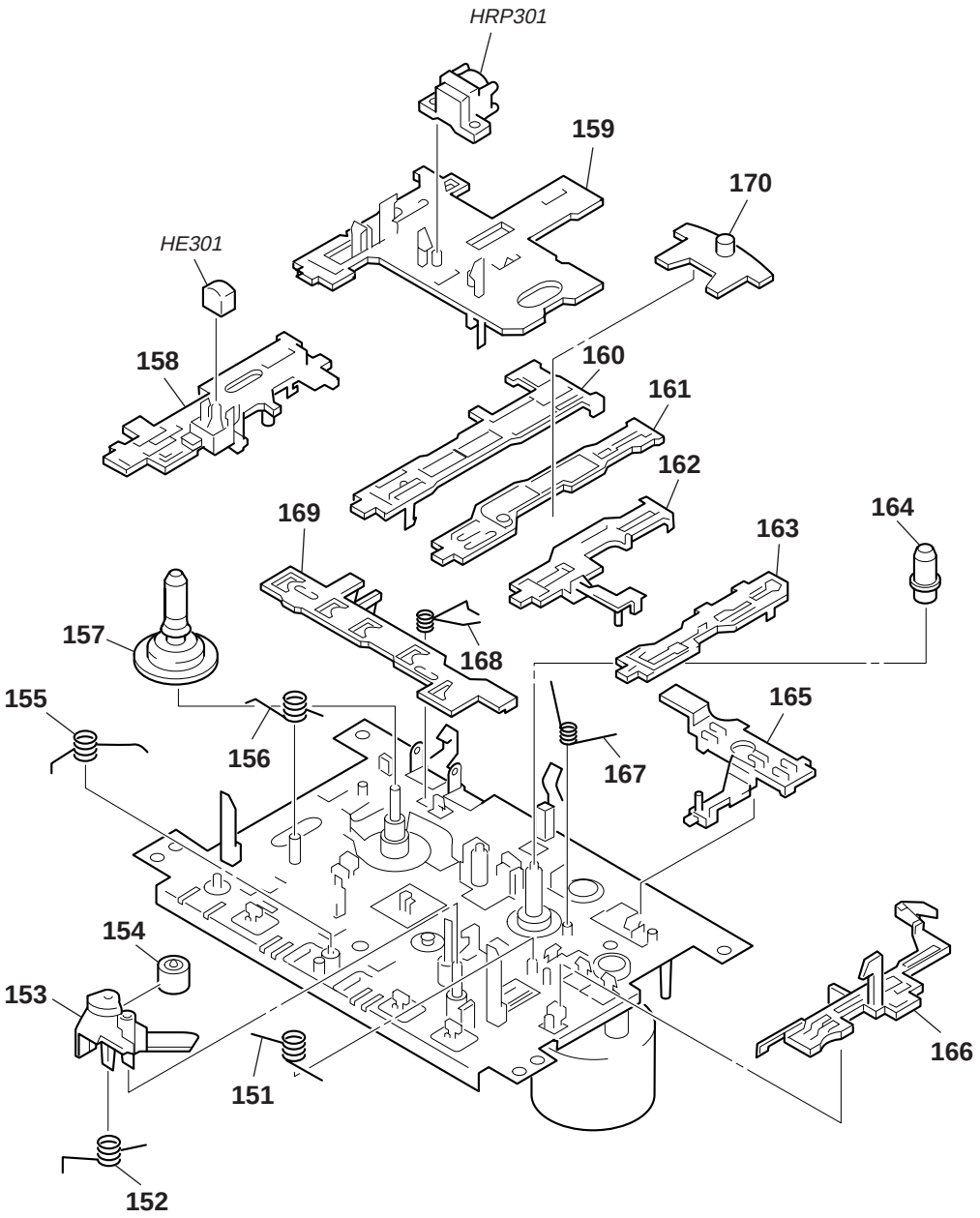
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 66 | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | |
| * 67 | 1-671-045-11 | LAMP BOARD | |
| 68 | 3-028-124-01 | HOLDER (LCD) | |
| 69 | 3-028-133-01 | SHEET, DIFFUSION | |
| * 70 | 3-028-117-01 | CHASSIS (BUTTON) | |
| 71 | X-3376-496-1 | BUTTON (CD) ASSY | |
| 72 | 3-028-115-01 | BUTTON (MD), REC | |
| 73 | 3-028-114-01 | BUTTON (MD), PLAY | |
| 74 | 3-028-113-01 | BUTTON (MD), REW | |
| 75 | 3-028-112-01 | BUTTON (MD), FF | |
| 76 | 3-028-111-01 | BUTTON (MD), EJECT | |
| 77 | 3-028-110-01 | BUTTON (MD), PAUSE | |
| 78 | 3-028-109-01 | LEVER (MD) | |
| 79 | 3-015-646-01 | CUSHION (CD) | |
| LCD501 | 1-803-275-11 | DISPLAY PANEL, LIQUID CRYSTAL | |

## 6-3. CD CHASSIS SECTION



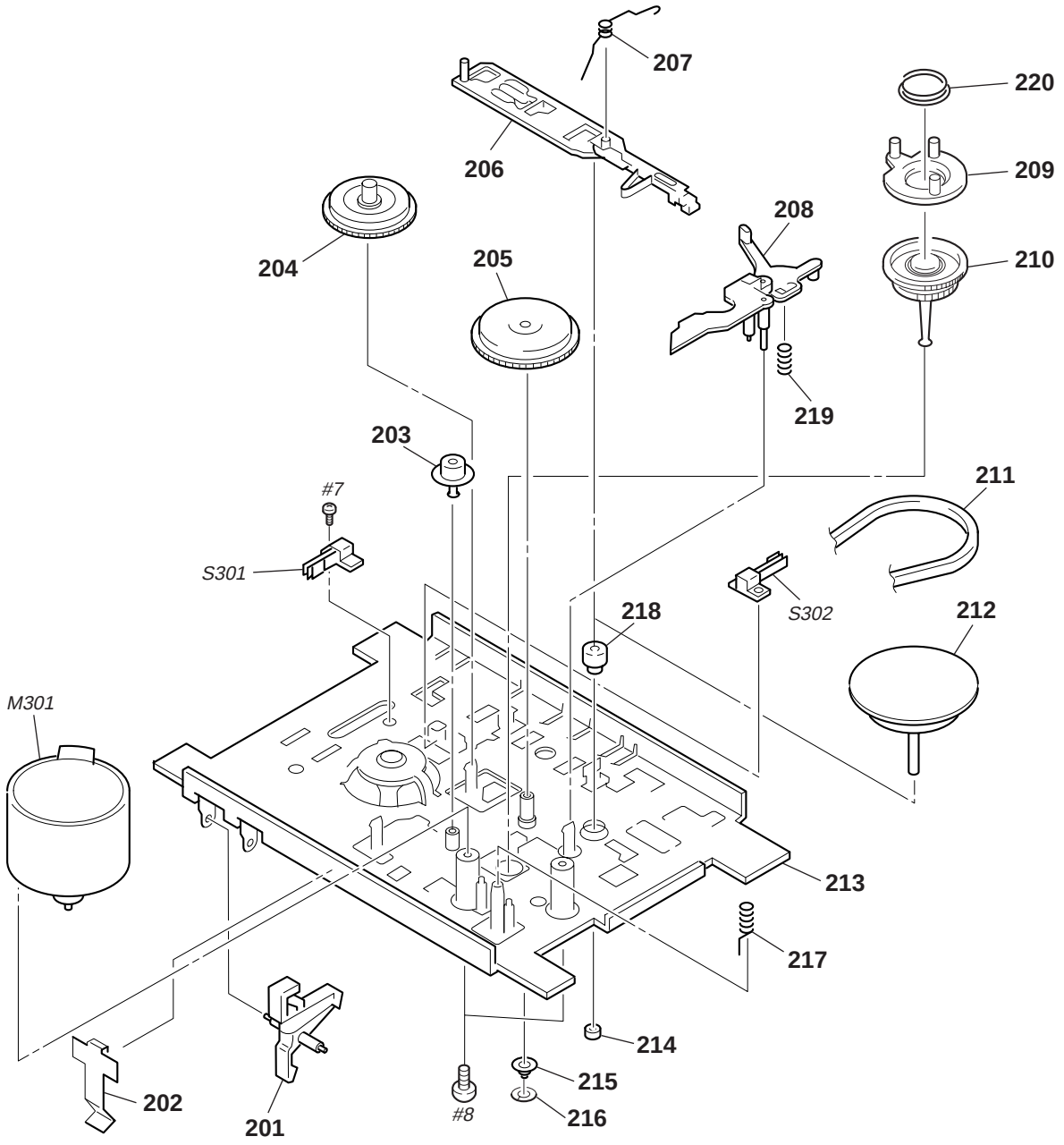

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 3-028-010-01 | TRAY | |
| 102 | 3-028-019-02 | PLATE, CHUCK | |
| 103 | 1-452-899-21 | MAGNET | |
| 104 | 3-028-011-01 | ARM | |
| 105 | 3-910-095-31 | RUBBER, VIBRATION PROOF | |
| 106 | 3-931-379-01 | RUBBER, VIBRATION PROOF | |
| 107 | 3-921-725-01 | SCREW (2.6X10), +PWH | |
| * 108 | 3-028-009-03 | CHASSIS | |
| 109 | 1-783-888-11 | WIRE (FLAT TYPE) (16 CORE) | |
| * 110 | A-3321-664-A | CD BOARD, COMPLETE | |
| * 111 | 1-671-072-11 | LOADING BOARD | |
| 112 | 3-028-013-01 | GEAR, DRIVE | |
| 113 | 3-028-014-01 | GEAR | |
| 114 | 3-028-015-01 | PULLEY | |
| 115 | 3-933-020-01 | BELT | |
| M651 | A-3320-538-A | MOTOR ASSY, LOADING (LOADING) | |

## 6-4. TAPE MECHANISM DECK SECTION-1 (MF-V10-117)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 3-933-010-01 | SPRING (S/P), TORSION | |
| 152 | 3-933-025-01 | SPRING (P), TORSION | |
| 153 | 3-933-026-01 | LEVER (P) | |
| 154 | 3-933-024-01 | ROLLER, PINCH | |
| 155 | 3-933-019-01 | SPRING (F/R), TORSION | |
| 156 | 3-933-028-01 | SPRING (FWD), TORSION | |
| 157 | 3-933-016-01 | GEAR (S REEL) | |
| 158 | 3-008-590-01 | SLIDER (REC) | |
| 159 | 3-008-592-01 | BASE (H), HEAD | |
| * 160 | 3-008-588-01 | SLIDER (REW) | |
| * 161 | 3-008-589-13 | SLIDER (FF) | |
| * 162 | 3-008-587-01 | SLIDER (STOP) | |
| * 163 | 3-008-591-01 | SLIDER (PAUSE) | |
| 164 | 3-933-004-01 | CLAW, REEL | |
| * 165 | 3-933-021-01 | SLIDER (FRP) | |
| * 166 | 3-933-006-01 | SLIDER (EJECT) | |
| 167 | 3-934-833-01 | SPRING (FRP) | |
| 168 | 3-022-794-02 | SPRING (BT) | |
| 169 | 3-933-007-01 | PLATE, LOCK | |
| * 170 | 3-012-114-01 | LEVER (FR) | |
| HE301 | 1-543-876-11 | HEAD (ERASE) | |
| HRP301 | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK) | |

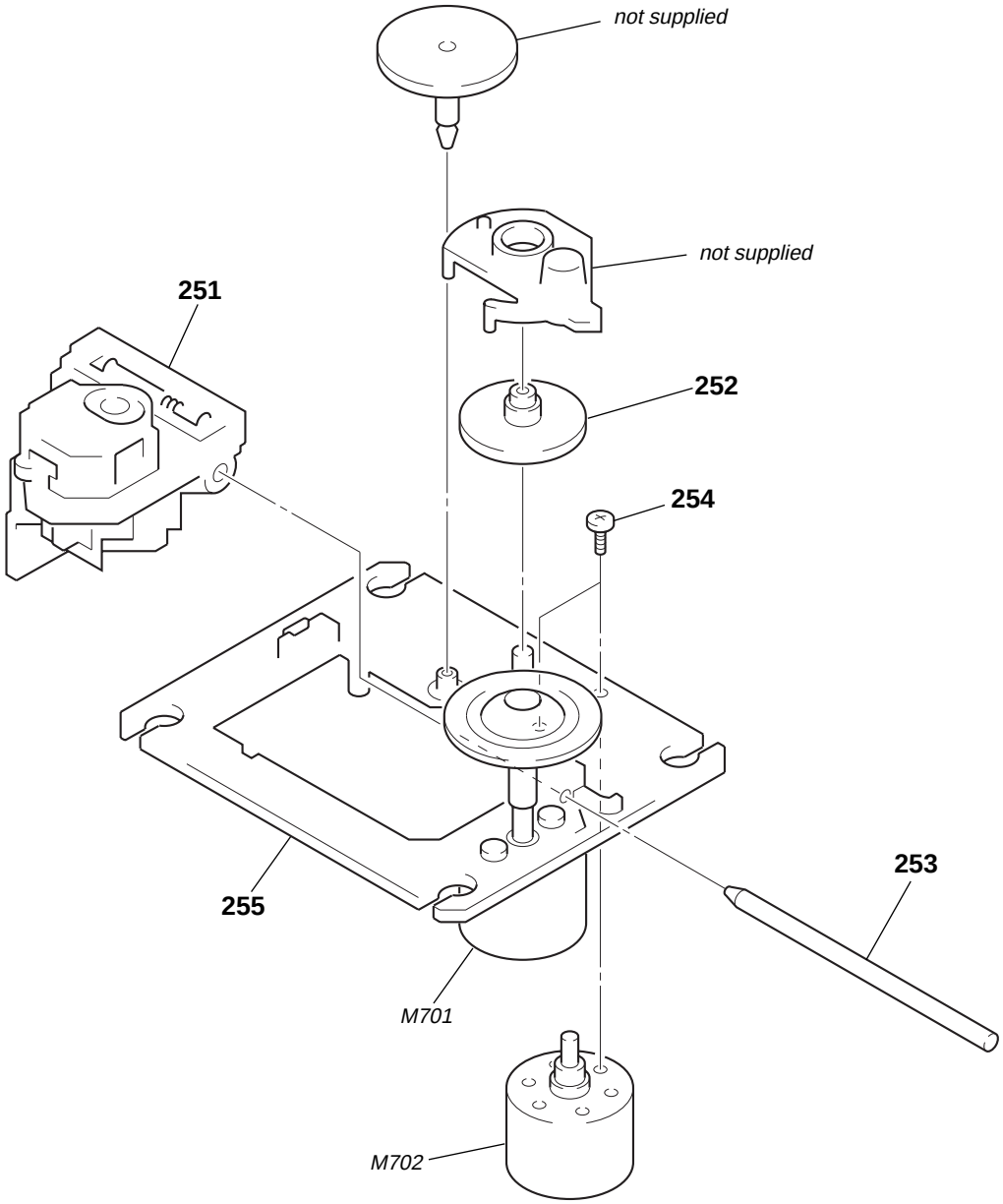
## 6-5. TAPE MECHANISM DECK SECTION-2 (MF-V10-117)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 201 | 3-933-029-01 | LEVER, ERASING PREVENTION | |
| 202 | 3-933-182-01 | SPRING, CASSETTE | |
| 203 | 3-932-995-01 | GEAR (MID) | |
| 204 | X-3371-667-1 | CLUTCH ASSY | |
| 205 | 3-932-997-01 | GEAR (CAM) | |
| * 206 | 3-932-999-01 | SLIDER (SW) | |
| 207 | 3-932-998-01 | SPRING (GROUND), TORSION | |
| 208 | 3-009-648-01 | LEVER (S.OFF) | |
| 209 | 3-936-438-01 | LEVER (K) | |
| 210 | X-3373-572-1 | REEL ASSY (N), T | |
| 211 | 3-933-020-01 | BELT | |
| 212 | X-3372-924-1 | FLYWHEEL ASSY | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 213 | 3-932-993-01 | CHASSIS, OUTSERT | |
| 214 | 3-343-358-01 | RING, RETAINING | |
| 215 | 3-933-005-01 | SPRING (CAM), COMPRESSION | |
| 216 | 3-016-349-01 | WASHER | |
| 217 | 3-937-760-01 | SPRING (GROUND), COMPRESSION | |
| 218 | 3-934-336-01 | BEARING | |
| 219 | 3-939-383-02 | SPRING, COMPRESSION | |
| 220 | 3-009-650-02 | SPRING (K), COMPRESSION | |
| M301 | A-3320-446-A | MOTOR ASSY (CAPSTAN/REEL) | |
| S301 | 1-762-679-11 | SWITCH, LEAF (TAPE PLAY) | |
| S302 | 1-771-059-11 | SWITCH, LEAF (MOTOR ON/OFF) | |

## 6-6. OPTICAL PICK-UP SECTION (KSM-213CCP)




| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| ⚠251 | 8-848-483-03 | PICK-UP, OPTICAL KSS-213C/C2N | |
| 252 | 2-627-003-02 | GEAR (B) (RP) | |
| 253 | 2-626-908-01 | SHAFT, SLED | |
| 254 | 3-713-786-51 | SCREW +P 2X3 | |
| 255 | X-2646-381-1 | CHASSIS ASSY (MB) (RP), MOTOR (SPINDLE) (INCLUDING M701) | |
| M702 | X-2625-769-1 | GEAR ASSY (MB), MOTOR (SLED) | |

BATT CD

# SECTION 7
# ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  CND : Canadian model
  SP : Singapore model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-077-11 | BATT BOARD | | | |
| | | ********** | | | |
| | 3-028-154-01 | TERMINAL (-), BATT | | | |
| | 3-028-156-01 | TERMINAL (S) (-), BATT | | | |
| | | < CONNECTOR > | | | |
| * CNP901 | 1-580-155-11 | PIN, CONNECTOR (PC BOARD) 3P | | | |
| ********** | | | | | |
| * | A-3321-664-A | CD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C701 | 1-162-600-11 | CERAMIC | 0.0047uF | 20% | 16V |
| C702 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C703 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C704 | 1-137-374-11 | FILM | 0.047uF | 5% | 50V |
| C705 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C706 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C707 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C708 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C709 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C710 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C711 | 1-162-203-31 | CERAMIC | 15PF | 5% | 50V |
| C712 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C713 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C714 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C715 | 1-126-233-11 | ELECT | 22uF | 20% | 50V |
| C716 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |
| C717 | 1-136-153-00 | FILM | 0.01uF | 5% | 50V |
| C718 | 1-131-375-00 | TANTALUM | 4.7uF | 10% | 10V |
| C719 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C720 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C721 | 1-136-159-00 | FILM | 0.033uF | 5% | 50V |
| C722 | 1-130-489-00 | MYLAR | 0.033uF | 5% | 50V |
| C723 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C724 | 1-130-489-00 | MYLAR | 0.033uF | 5% | 50V |
| C725 | 1-137-440-11 | FILM | 0.018uF | 5% | 50V |
| C726 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C727 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C728 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C729 | 1-126-962-11 | ELECT | 3.3uF | 20% | 50V |
| C730 | 1-137-375-11 | FILM | 0.068uF | 5% | 50V |
| C731 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C732 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C735 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C736 | 1-124-472-11 | ELECT | 470uF | 20% | 10V |
| C737 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C738 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C740 | 1-137-375-11 | FILM | 0.068uF | 5% | 50V |
| C741 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| | | < CONNECTOR > | | | |
| * CNP701 | 1-779-466-11 | CONNECTOR, FFC/FPC 16P | | | |
| CNP702 | 1-770-527-31 | CONNECTOR, FFC/FPC 20P | | | |
| | | < IC > | | | |
| IC701 | 8-752-082-14 | IC CXA1992BR | | | |
| IC702 | 8-759-473-42 | IC BA6898FP | | | |
| | | < TRANSISTOR > | | | |
| Q701 | 8-729-037-13 | TRANSISTOR KTA1271Y | | | |
| | | < RESISTOR > | | | |
| R701 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R702 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R703 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R704 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R705 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R706 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R707 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R709 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R710 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R711 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R712 | 1-247-891-00 | CARBON | 330K | 5% | 1/4W |
| R714 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R715 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R716 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R717 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R718 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R719 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R720 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R721 | 1-247-862-11 | CARBON | 20K | 5% | 1/4W |
| R722 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R723 | 1-247-896-11 | CARBON | 510K | 5% | 1/4W |
| R724 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W |
| R725 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R726 | 1-247-876-11 | CARBON | 75K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R727 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R728 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R729 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R731 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R733 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R734 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R736 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R738 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R739 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R740 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R741 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R742 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R743 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R747 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| | | < SWITCH > | | | |
| S701 | 1-762-812-11 | SWITCH, LEAF (LIMIT) | | | |

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|---|---|---|---|---|---|
| * | 1-671-176-11 | HEADPHONE BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C158 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C258 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| | | < CONNECTOR > | | | |
| * CNP307 | 1-580-165-11 | PIN, CONNECTOR (PC BOARD) 4P | | | |
| | | < JACK > | | | |
| J301 | 1-779-050-11 | JACK (🎧) | | | |
| | | < CABLE HOLDER > | | | |
| * KH306 | 1-565-386-11 | HOLDER, CABLE 5P | | | |
| | | < COIL > | | | |
| L151 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| L251 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| L351 | 1-410-324-11 | INDUCTOR | 4.7uH | | |
| | | < RESISTOR > | | | |
| R157 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R158 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R257 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R258 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |

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| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-045-11 | LAMP BOARD | | | |
| | | ********** | | | |
| | | < CONNECTOR > | | | |
| * CNP308 | 1-580-154-11 | PIN, CONNECTOR (PC BOARD) 2P | | | |
| | | < PILOT LAMP > | | | |
| PL301 | 1-517-474-31 | LAMP, PILOT (8V/75mA) | | | |
| PL302 | 1-517-474-31 | LAMP, PILOT (8V/75mA) | | | |

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| | | | | | |
|---|---|---|---|---|---|
| * | 1-671-072-11 | LOADING BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C651 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| | | < CONNECTOR > | | | |
| * CN651 | 1-580-167-11 | PIN, CONNECTOR (PC BOARD) 6P | | | |
| | | < IC > | | | |
| IC651 | 8-759-962-08 | IC BA6208 | | | |
| | | < SWITCH > | | | |
| S651 | 1-771-489-11 | SWITCH, LEVER SLIDE (LOADING IN/OUT DET) | | | |

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|---|---|---|---|---|---|
| * | A-3321-663-A | MAIN BOARD, COMPLETE (US,CND,E) | | | |
| * | A-3321-767-A | MAIN BOARD, COMPLETE (SP) | | | |
| | | ********** | | | |
| | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | | | |
| | 3-028-124-01 | HOLDER (LCD) | | | |
| | 3-028-133-01 | SHEET, DIFFUSION | | | |
| | 3-831-441-99 | CUSHION, SPEAKER | | | |
| | 4-951-620-01 | SCREW (2.6X8), +BVTP | | | |
| | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C102 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C103 | 1-161-020-11 | CERAMIC | 0.039uF | 10% | 16V |
| C104 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C105 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C107 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C108 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C141 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C142 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C143 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C144 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C145 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C146 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V |
| C147 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |

## MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C150 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C151 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C152 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C153 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C154 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C155 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C156 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C157 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C159 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C201 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C202 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C203 | 1-161-020-11 | CERAMIC | 0.039uF | 10% | 16V |
| C204 | 1-162-302-11 | CERAMIC | 0.0022uF | 20% | 16V |
| C205 | 1-162-215-31 | CERAMIC | 47PF | 5% | 50V |
| C207 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C208 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C241 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C242 | 1-162-305-11 | CERAMIC | 0.0068uF | 20% | 16V |
| C243 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C244 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C245 | 1-162-849-11 | CERAMIC | 0.068uF | 10% | 16V |
| C246 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V |
| C247 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C250 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C251 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C252 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C253 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C254 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C255 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C256 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C257 | 1-130-495-00 | MYLAR | 0.1uF | 5% | 50V |
| C259 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C301 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C302 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C303 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C304 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C305 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C306 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C307 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C308 | 1-130-481-00 | MYLAR | 0.0068uF | 5% | 50V |
| C309 | 1-162-301-11 | CERAMIC | 0.0015uF | 20% | 16V |
| C310 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C331 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C332 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C333 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C334 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C335 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C336 | 1-126-961-11 | ELECT | 2.2uF | 20% | 50V |
| C337 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C338 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C339 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| C340 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C341 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C342 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C345 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C350 | 1-104-666-11 | ELECT | 220uF | 20% | 16V |
| C351 | 1-126-937-11 | ELECT | 4700uF | 20% | 16V |
| C352 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C353 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C355 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C356 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C358 | 1-124-442-00 | ELECT | 330uF | 20% | 6.3V |
| C359 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C360 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C362 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C363 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C364 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C366 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C367 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C368 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C501 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C502 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C503 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C506 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C507 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C508 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C510 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C512 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C514 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C515 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C516 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C517 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C518 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C519 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C520 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C521 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C522 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C523 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C524 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C525 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C526 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C527 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C529 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C535 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C536 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C537 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C538 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C539 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C540 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C541 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C542 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C543 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C544 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C545 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C546 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C547 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C548 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C549 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C550 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C551 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C552 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C553 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C554 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C555 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C556 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C557 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C558 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C559 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C560 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C561 | 1-124-443-00 | ELECT | 100uF | 20% | 10V |
| C562 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C563 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C564 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C566 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C567 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C568 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C569 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C570 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C573 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C602 | 1-104-664-11 | ELECT | 47uF | 20% | 10V |
| C745 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V (US,CND,E) |
| C746 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C747 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C748 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C749 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C750 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C755 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C756 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C760 | 1-137-194-81 | FILM | 0.47uF | 5% | 50V |
| C761 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C763 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C764 | 1-102-516-11 | CERAMIC | 27PF | 5% | 50V |
| C765 | 1-162-286-21 | CERAMIC | 220PF | 10% | 50V |
| C766 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C767 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C768 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C769 | 1-136-169-00 | FILM | 0.22uF | 5% | 50V |
| C770 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C771 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C772 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C773 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C774 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C775 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C776 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C780 | 1-162-284-31 | CERAMIC | 150PF | 10% | 50V |
| C781 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C782 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C783 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C790 | 1-162-284-31 | CERAMIC | 150PF | 10% | 50V |
| C791 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C792 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C793 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |

< CONNECTOR >

| Ref. No. | Part No. | Description |
|---|---|---|
| CNP301 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP302 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| * CNP303 | 1-580-158-11 | PIN, CONNECTOR (PC BOARD) 6P |
| CNP305 | 1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P |
| CNP306 | 1-506-987-11 | PIN, CONNECTOR (PC BOARD) 5P |
| CNP501 | 1-784-231-12 | SOCKET, CONNECTOR (PC BOARD) 10P |
| * CNP503 | 1-580-161-11 | PIN, CONNECTOR (PC BOARD) 9P |
| CNP704 | 1-691-052-31 | HOUSING, CONNECTOR 20P |

< DIODE >

| Ref. No. | Part No. | Description |
|---|---|---|
| D302 | 8-719-991-33 | DIODE 1SS133T-77 |
| D350 | 8-719-991-33 | DIODE 1SS133T-77 |
| D351 | 8-719-991-33 | DIODE 1SS133T-77 |
| D352 | 8-719-991-33 | DIODE 1SS133T-77 |
| D353 | 8-719-991-33 | DIODE 1SS133T-77 |
| D354 | 8-719-991-33 | DIODE 1SS133T-77 |
| D355 | 8-719-109-97 | DIODE RD6.8ES-B2 |
| D356 | 8-719-109-89 | DIODE RD5.6ESB2 |
| D357 | 8-719-110-09 | DIODE RD8.2ES-B3 |
| D358 | 8-719-991-33 | DIODE 1SS133T-77 |
| D501 | 8-719-991-33 | DIODE 1SS133T-77 |
| D502 | 8-719-991-33 | DIODE 1SS133T-77 |
| D503 | 8-719-991-33 | DIODE 1SS133T-77 |
| D504 | 8-719-991-33 | DIODE 1SS133T-77 |
| D505 | 8-719-991-33 | DIODE 1SS133T-77 |
| D506 | 8-719-991-33 | DIODE 1SS133T-77 |
| D507 | 8-719-991-33 | DIODE 1SS133T-77 |
| D508 | 8-719-991-33 | DIODE 1SS133T-77 |

< FERRITE BEAD >

| Ref. No. | Part No. | Description |
|---|---|---|
| FB701 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,CND,E) |
| FB702 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB704 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB705 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |
| FB706 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH |

< IC >

| Ref. No. | Part No. | Description |
|---|---|---|
| IC301 | 8-759-264-71 | IC TA2068N |
| IC302 | 8-759-432-41 | IC BH3854AS |
| IC305 | 8-759-426-51 | IC BA5417 |
| IC306 | 8-759-426-51 | IC BA5417 |
| IC501 | 8-752-901-33 | IC CXP83120A-035Q |
| IC502 | 8-759-511-42 | IC S-80730AN |
| IC503 | 8-759-479-70 | IC S-81250SGY-B |
| IC703 | 8-752-384-13 | IC CXD2589Q |

# MAIN

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| | | < CABLE HOLDER > | | | | |
| * KH308 | 1-573-287-11 | HOLDER, CABLE 2P | | | | |
| | | < COIL > | | | | |
| L501 | 1-412-832-11 | INDUCTOR | 1uH | | | |
| L502 | 1-412-832-11 | INDUCTOR | 1uH | | | |
| L503 | 1-410-509-11 | INDUCTOR | 10uH | | | |
| | | < LIQUID CRYSTAL DISPLAY > | | | | |
| LCD501 | 1-803-275-11 | DISPLAY PANEL, LIQUID CRYSTAL | | | | |
| | | < TRANSISTOR > | | | | |
| Q301 | 8-729-281-53 | TRANSISTOR | 2SC1815-GR | | | |
| Q302 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q303 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q304 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q341 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q342 | 8-729-036-80 | TRANSISTOR | KRC110M | | | |
| Q351 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q352 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q353 | 8-729-021-82 | TRANSISTOR | 2SD2396K | | | |
| Q354 | 8-729-036-86 | TRANSISTOR | KTC3203Y-AT | | | |
| Q355 | 8-729-209-15 | TRANSISTOR | 2SD2012 | | | |
| Q356 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q357 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q358 | 8-729-036-57 | TRANSISTOR | KRC101M-AT | | | |
| Q359 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q360 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q368 | 8-729-037-13 | TRANSISTOR | KTA1271Y | | | |
| Q369 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q501 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q502 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q503 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q504 | 8-729-036-77 | TRANSISTOR | KRC107M | | | |
| Q505 | 8-729-036-80 | TRANSISTOR | KRC110M | | | |
| Q506 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| Q507 | 8-729-922-66 | TRANSISTOR | 2SC2410SN | | | |
| Q508 | 8-729-922-66 | TRANSISTOR | 2SC2410SN | | | |
| Q509 | 8-729-037-34 | TRANSISTOR | KRA107M | | | |
| | | < RESISTOR > | | | | |
| R101 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R102 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W | |
| R103 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R104 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W | |
| R105 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R106 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R107 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R110 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R140 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R141 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |

| Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R150 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R151 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R152 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R153 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R154 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| ⚠R155 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| ⚠R156 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| R159 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R160 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R201 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R202 | 1-249-404-00 | CARBON | 82 | 5% | 1/4W | |
| R203 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R204 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W | |
| R205 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R206 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R207 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R210 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R240 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R241 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R250 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R251 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R252 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R253 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R254 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| ⚠R255 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| ⚠R256 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W | F |
| R259 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R260 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R301 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W | |
| R302 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R303 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R304 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R305 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | |
| R307 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R311 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R312 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R313 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R340 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | |
| R342 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R343 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R344 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R345 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W | |
| R349 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R350 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R351 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R352 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R353 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R354 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R355 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R356 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W | |
| R357 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R358 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W | |
| R359 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une piéce portant le numéro spécifié. |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R360 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R361 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R362 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R363 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R501 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R502 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R503 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R504 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R505 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R506 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R507 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R508 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R509 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R510 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R511 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R512 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R513 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R514 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R515 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R516 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R517 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R518 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R519 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R520 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R521 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R522 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R523 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R524 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R525 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R526 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R527 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R528 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R529 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R530 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R531 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R532 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R533 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R534 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R535 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R536 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R537 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| R538 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R539 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R540 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R541 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R542 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R543 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R544 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R545 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R546 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R547 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R548 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R549 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R550 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R551 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R552 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R553 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R554 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R555 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R556 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R557 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R558 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R559 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R560 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R561 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R562 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R563 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R564 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R565 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R566 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R567 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R568 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R569 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R570 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R571 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R572 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R573 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R574 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R575 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R576 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R577 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| ⚠R578 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W F |
| R579 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R580 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |
| R582 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R583 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W (US,CND,E) |
| R583 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W (SP) |
| R584 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R586 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R587 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R588 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R589 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R590 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R591 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R592 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R593 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R594 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R595 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R596 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R598 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R599 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R600 | 1-247-863-00 | CARBON | 22K | 5% | 1/4W |
| R629 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R630 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.<br>Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.<br>Ne les remplacer que par une piéce portant le numéro spécifié. |

## MAIN POWER

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R631 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R713 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R730 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R732 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R748 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R749 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R750 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R751 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R752 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R753 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R754 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R755 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R756 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R757 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R758 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R759 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R764 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R765 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R770 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R771 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R772 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R773 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R774 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| R775 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R776 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R780 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R781 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R782 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R783 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R790 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R791 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R792 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W |
| R793 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| | | < TRANSFORMER > | | | |
| T301 | 1-433-268-00 | TRANSFORMER, BIAS OSCILLATOR | | | |
| | | < VIBRATOR > | | | |
| X501 | 1-767-184-11 | VIBRATOR, CERAMIC (4.19MHz) | | | |
| X502 | 1-767-697-11 | VIBRATOR, CRYSTAL (32.768kHz) | | | |
| X701 | 1-577-253-11 | VIBRATOR, CERAMIC (16.9344MHz) | | | |
| ********** | | | | | |
| * | 1-671-179-11 | POWER BOARD | | | |
| | | ********** | | | |
| | 1-533-233-31 | HOLDER, FUSE | | | |
| | | < CAPACITOR > | | | |
| C901 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C902 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C903 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C904 | 1-101-005-00 | CERAMIC | 22000PF | | 50V |
| C906 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C907 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C908 | 1-126-768-11 | ELECT | 2200uF | 20% | 16V |
| C909 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| | | < AC INLET > | | | |
| ⚠CNJ901 | 1-526-818-11 | INLET, AC (~AC IN) (E) | | | |
| ⚠CNJ901 | 1-526-838-11 | INLET, AC 2P (~AC IN) (SP) | | | |
| ⚠CNJ901 | 1-540-009-11 | INLET, AC (~AC IN) (US,CND) | | | |
| | | < DIODE > | | | |
| D901 | 8-719-031-53 | DIODE LT2A02 | | | |
| D902 | 8-719-031-53 | DIODE LT2A02 | | | |
| D903 | 8-719-031-53 | DIODE LT2A02 | | | |
| D904 | 8-719-031-53 | DIODE LT2A02 | | | |
| D905 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D906 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D907 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D908 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D909 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| | | < FUSE > | | | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15A/250V) (SP) | | | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) | | | (US,CND,E) |
| | | < FERRITE BEAD > | | | |
| FB901 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,CND,E) | | | |
| FB902 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1uH (US,CND,E) | | | |
| | | < IC > | | | |
| IC901 | 8-759-479-70 | IC S-81250SGY-B | | | |
| | | < CABLE HOLDER > | | | |
| * KH901 | 1-565-384-11 | HOLDER, CABLE 3P | | | |
| * KH902 | 1-565-385-11 | HOLDER, CABLE 4P | | | |
| | | < LINE FILTER > | | | |
| ⚠LF901 | 1-402-663-11 | TRANSFORMER, LINE FILTER (LFT) | | | |
| | | < RESISTOR > | | | |
| R900 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R901 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R903 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W |
| R904 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| | | < TRANSFORMER > | | | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | | | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,CND,E) | | | |
| ********** | | | | | |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

# RECORD/PLAYBACK SWITCH | SW (L) | SW (R) | SW (TOP)

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| * | 1-671-653-11 | RECORD/PLAYBACK SWITCH BOARD | | | |
| | | ********** | | | |
| | | < CABLE HOLDER > | | | |
| * KH305 | 1-565-385-11 | HOLDER, CABLE 4P | | | |
| | | < SWITCH > | | | |
| S301 | 1-762-565-11 | SWITCH, SLIDE (REC/PB) | | | |
| ********** | | | | | |
| * | 1-671-182-11 | SW (L) BOARD | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C601 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C603 | 1-161-494-00 | CERAMIC | 0.022uF | | 25V |
| | | < CONNECTOR > | | | |
| CNJ601 | 1-784-230-11 | PLUG, CONNECTOR (PC BOARD) 10P | | | |
| | | < DIODE > | | | |
| D605 | 8-719-038-29 | LED SLP-181B-51 (OPR/BATT) | | | |
| | | < IC > | | | |
| IC601 | 8-759-459-85 | IC NJL63H400A | | | |
| | | < CABLE HOLDER > | | | |
| * KH601 | 1-573-287-11 | HOLDER, CABLE 2P | | | |
| | | < RESISTOR > | | | |
| R601 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R626 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R627 | 1-247-815-00 | CARBON | 220 | 5% | 1/4W |
| | | < SWITCH > | | | |
| S601 | 1-762-798-11 | SWITCH, KEY BOARD (OPERATE) | | | |
| S602 | 1-762-798-11 | SWITCH, KEY BOARD (SLEEP) | | | |
| S616 | 1-762-798-11 | SWITCH, KEY BOARD (STANDBY) | | | |
| ********** | | | | | |
| * | 1-671-181-11 | SW (R) BOARD | | | |
| | | ********** | | | |
| | | < CABLE HOLDER > | | | |
| * KH602 | 1-573-287-11 | HOLDER, CABLE 2P | | | |
| | | < RESISTOR > | | | |
| R620 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R621 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R622 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < SWITCH > | | | |
| S623 | 1-762-798-11 | SWITCH, KEY BOARD (⏏ CD OPEN/CLOSE) | | | |
| S624 | 1-762-798-11 | SWITCH, KEY BOARD (TIMER) | | | |
| S625 | 1-762-798-11 | SWITCH, KEY BOARD (CLOCK) | | | |
| S626 | 1-762-798-11 | SWITCH, KEY BOARD (DISPLAY ENTER MEM) | | | |
| ********** | | | | | |
| * | 1-671-180-11 | SW (TOP) BOARD | | | |
| | | ********** | | | |
| | 3-028-125-01 | HOLDER (LED) | | | |
| | | < DIODE > | | | |
| D601 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE ROCK) | | | |
| D602 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE POP) | | | |
| D603 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE LIVE) | | | |
| D604 | 8-719-038-29 | LED SLP-181B-51 (PRESET SOUND MODE VOCAL) | | | |
| | | < RESISTOR > | | | |
| R602 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R603 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R604 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R605 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R606 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R607 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W |
| R608 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R609 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R610 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R611 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R612 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R613 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R614 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R615 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R616 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R617 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R618 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R619 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R625 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| | | < SWITCH > | | | |
| S603 | 1-762-798-11 | SWITCH, KEY BOARD (MONO/ST ISS PLAY MODE) | | | |
| S604 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE OFF) | | | |
| S605 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE ROCK) | | | |
| S606 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE POP) | | | |
| S607 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE LIVE) | | | |

## SW (TOP) TUNER

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| S608 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET SOUND MODE VOCAL) | |
| S609 | 1-762-798-11 | SWITCH, KEY BOARD (►❚❚) | |
| S610 | 1-762-798-11 | SWITCH, KEY BOARD (■) | |
| S611 | 1-762-798-11 | SWITCH, KEY BOARD (►►❙/TUNE +) | |
| S612 | 1-762-798-11 | SWITCH, KEY BOARD (❙◄◄/TUNE -) | |
| S613 | 1-762-798-11 | SWITCH, KEY BOARD (MEGA BASS) | |
| S614 | 1-762-798-11 | SWITCH, KEY BOARD (VOL +) | |
| S615 | 1-762-798-11 | SWITCH, KEY BOARD (VOL -) | |
| S617 | 1-762-798-11 | SWITCH, KEY BOARD (BAND) | |
| S618 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET +) | |
| S619 | 1-762-798-11 | SWITCH, KEY BOARD (PRESET -) | |
| S620 | 1-762-798-11 | SWITCH, KEY BOARD (FUNCTION) | |
| S621 | 1-762-798-11 | SWITCH, KEY BOARD (LOOP) | |
| S622 | 1-762-798-11 | SWITCH, KEY BOARD (FLASH) | |

**********

| | | | |
|---|---|---|---|
| * | A-3321-667-A | TUNER BOARD, COMPLETE (US,CND,E) | |
| * | A-3321-920-A | TUNER BOARD, COMPLETE (SP) | |
| | | ********** | |

< CAPACITOR >

| | | | | | |
|---|---|---|---|---|---|
| C3 | 1-162-301-11 | CERAMIC | 0.0015uF | 30% | 16V |
| C10 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C11 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C12 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C13 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C14 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V (SP) |
| C14 | 1-162-843-11 | CERAMIC | 0.022uF | 10% | 16V (US,CND,E) |
| C15 | 1-161-053-00 | CERAMIC | 0.015uF | 10% | 50V (SP) |
| C15 | 1-162-843-11 | CERAMIC | 0.022uF | 10% | 16V (US,CND,E) |
| C16 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C17 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C18 | 1-104-666-11 | ELECT | 220uF | 20% | 10V |
| C20 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C21 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C22 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C23 | 1-124-903-11 | ELECT | 1uF | 20% | 50V |
| C24 | 1-162-288-31 | CERAMIC | 330PF | 10% | 50V |
| C25 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C26 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C27 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C30 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C31 | 1-102-514-11 | CERAMIC | 22PF | 5% | 50V |
| C32 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C33 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C34 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C35 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C40 | 1-164-159-21 | CERAMIC | 0.1uF | | 50V |
| C41 | 1-102-820-00 | CERAMIC | 330PF | 5% | 50V |
| C42 | 1-162-198-31 | CERAMIC | 8.2PF | 10% | 50V |
| C43 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C44 | 1-162-839-11 | CERAMIC | 0.01uF | 10% | 16V |
| C45 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C60 | 1-102-518-11 | CERAMIC | 33PF | 5% | 50V |
| C61 | 1-162-203-31 | CERAMIC | 15PF | 5% | 50V |
| C62 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C64 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C65 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C68 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C69 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C70 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C71 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C72 | 1-124-907-11 | ELECT | 10uF | 20% | 50V |
| C75 | 1-136-177-00 | FILM | 1uF | 5% | 50V |
| C77 | 1-130-483-00 | MYLAR | 0.01uF | 5% | 50V |
| C80 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C90 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C91 | 1-162-294-31 | CERAMIC | 0.001uF | 10% | 50V |
| C92 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C93 | 1-162-306-11 | CERAMIC | 0.01uF | 20% | 16V |
| C94 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |

< FILTER >

| | | | |
|---|---|---|---|
| CF2 | 1-760-738-61 | FILTER, CERAMIC | |
| CF3 | 1-781-171-11 | DISCRIMINATOR, CERAMIC | |

< ENCAPSULATED COMPONENT >

| | | | |
|---|---|---|---|
| CFT1 | 1-233-885-11 | ENCAPSULATED COMPONENT | |

< FUSE HOLDER >

| | | | |
|---|---|---|---|
| CN4 | 1-533-233-31 | HOLDER, FUSE | |

< CONNECTOR >

| | | | |
|---|---|---|---|
| * CNP1 | 1-774-959-11 | PIN, CONNECTOR (PC BOARD) 13P | |

< TRIMMER >

| | | | |
|---|---|---|---|
| CT1 | 1-141-603-11 | CAP, ADJ | 20PF |
| CT3 | 1-141-601-11 | CAP, ADJ | 10PF |

< DIODE >

| | | | |
|---|---|---|---|
| D1 | 8-719-050-72 | DIODE | KV1370NT |
| D2 | 8-719-050-72 | DIODE | KV1370NT |
| D3 | 8-719-050-69 | DIODE | KV1520N |
| D10 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D11 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D13 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D14 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D15 | 8-719-991-33 | DIODE | 1SS133T-77 |
| D16 | 8-719-991-33 | DIODE | 1SS133T-77 |

< BAND PASS FILTER >

| | | | |
|---|---|---|---|
| FL1 | 1-236-711-21 | FILTER, BAND PASS | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < IC > | | | |
| IC1 | 8-759-549-84 | IC TA2104AN | | | |
| IC2 | 8-759-549-77 | IC BH2615S | | | |
| | | < COIL > | | | |
| L1 | 1-409-905-31 | COIL, FM RF | | | |
| L2 | 1-409-904-31 | COIL, FM OSC | | | |
| L3 | 1-501-923-21 | ANTENNA, FERRITE-ROD (AM) | | | |
| L4 | 1-411-234-41 | COIL, AM OSC | | | |
| L40 | 1-410-509-11 | INDUCTOR | 10uH | | |
| L90 | 1-414-142-11 | INDUCTOR | 1uH | | |
| | | < TRANSISTOR > | | | |
| Q10 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q11 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q12 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q13 | 8-729-036-77 | TRANSISTOR KRC107M | | | |
| Q60 | 8-729-012-83 | FET 2SK679A | | | |
| Q61 | 8-729-106-07 | FET 2SK514-HR | | | |
| Q80 | 8-729-037-24 | TRANSISTOR KRA111M-AT | | | |
| | | < RESISTOR > | | | |
| R1 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R7 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R10 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R11 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R12 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R13 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R14 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R30 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R31 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R32 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R33 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R40 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R41 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R60 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R61 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R62 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R63 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R64 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R65 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R66 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R71 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R72 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R73 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R74 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R75 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R76 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R80 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R91 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < VIBRATOR > | |
| X1 | 1-760-130-11 | VIBRATOR, CRYSTAL (75kHz) | |
| ********** | | | |
| | | MISCELLANEOUS | |
| | | ********** | |
| 66 | 1-783-889-11 | WIRE (FLAT TYPE) (20 CORE) | |
| 103 | 1-452-899-21 | MAGNET | |
| 109 | 1-783-888-11 | WIRE (FLAT TYPE) (16 CORE) | |
| ⚠251 | 8-848-483-03 | PICK-UP, OPTICAL KSS-213C/C2N | |
| 255 | X-2646-381-1 | CHASSIS ASSY (MB) (RP), MOTOR (SPINDLE) (INCLUDING M701) | |
| ANT1 | 1-501-480-11 | ANTENNA, TELESCOPIC | |
| ⚠F902 | 1-532-465-51 | FUSE, TIME LAG (T3.15AL/250V) (SP) | |
| ⚠F902 | 1-533-620-11 | FUSE, GLASS CYLINDERICAL (5A/250V) (US,CND,E) | |
| HE301 | 1-543-876-11 | HEAD (ERASE) | |
| HRP301 | 1-500-454-11 | HEAD, MAGNETIC (RECORD/PLAYBACK) | |
| M301 | A-3320-446-A | MOTOR ASSY (CAPSTAN/REEL) | |
| M651 | A-3320-538-A | MOTOR ASSY, LOADING (LOADING) | |
| M702 | X-2625-769-1 | GEAR ASSY (MB), MOTOR (SLED) | |
| S301 | 1-762-679-11 | SWITCH, LEAF (TAPE PLAY) | |
| S302 | 1-771-059-11 | SWITCH, LEAF (MOTOR ON/OFF) | |
| SP301 | 1-529-131-11 | SPEAKER (8cm) (L-CH) | |
| SP302 | 1-529-131-11 | SPEAKER (8cm) (R-CH) | |
| ⚠T901 | 1-433-422-11 | TRANSFORMER, POWER (SP) | |
| ⚠T901 | 1-433-423-11 | TRANSFORMER, POWER (US,CND,E) | |
| ********** | | | |
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ********** | |
| ⚠ | 1-557-287-11 | CORD, POWER (E) | |
| ⚠ | 1-690-952-11 | CORD, POWER (CND) | |
| ⚠ | 1-769-412-11 | CORD, POWER (SP) | |
| ⚠ | 1-783-878-11 | CORD, POWER (US) | |
| | 3-027-153-01 | LID, BATTERY CASE (for RMT-CS47A) | |
| | 3-864-534-11 | MANUAL, INSTRUCTION (ENGLISH,SPANISH) (SP) | |
| | 3-864-534-21 | MANUAL, INSTRUCTION (ENGLISH,GERMAN) (SP) | |
| | 3-864-534-51 | MANUAL, INSTRUCTION (ENGLISH) (US,CND,E) | |
| | 3-864-534-61 | MANUAL, INSTRUCTION (FRENCH) (CND) | |
| | 3-864-534-71 | MANUAL, INSTRUCTION (SPANISH) (E) | |
| | A-3250-870-A | RMT-CS47A//C (SET) | |
| ********** | | | |

| | |
|---|---|
| The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ********** | |
| | | HARDWARE LIST | |
| | | ********** | |
| #1 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S | |
| #2 | 7-685-649-79 | SCREW +BTP 3X14 TYPE2 N-S | |
| #3 | 7-682-548-04 | SCREW +B 3X8 | |
| #4 | 7-685-134-19 | SCREW +P 2.6X8 TYPE2 NON-SLIT | |
| #5 | 7-621-255-45 | SCREW +P 2X6 | |
| #6 | 7-621-772-00 | SCREW +B 2X3 | |
| #7 | 7-685-783-09 | SCREW +PTT 2X6 (S) | |
| #8 | 7-621-770-87 | SCREW +B 2.6X5 | |
| #9 | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S | |
| #10 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |



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